JULY 1960

The Controller

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EXPECTED COST— THE COMMON DENOMINATOR

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FAST PROCESSING OF DAILY ORDERS

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CLERICAL WORK MEASUREMENT KEYED TO MODERN EQUIPMENT

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CONCEPT OF MODERN CONTROLLERSHIP
of Controllers Institute of America

1. To establish, coordinate and administer, as an integral part of management, an adequate plan for the control of operations. Such a plan would provide, to the extent required in the business, profit planning, programs for capital investing and for financing, sales forecasts, expense budgets and cost standards, together with the necessary procedures to effectuate the plan.

2. To compare performance with operating plans and standards, and to report and interpret the results of operations to all levels of management and to the owners of the business. This function includes the formulation and administration of accounting policy and the compilation of statistical records and special reports as required.

3. To consult with all segments of management responsible for policy or action concerning any phase of the operation of the business as it relates to the attainment of objectives and the effectiveness of policies, organization structure and procedures.

4. To administer tax policies and procedures.

5. To supervise or coordinate the preparation of reports to governmental agencies.

6. To assure fiscal protection for the assets of the business through adequate internal control and proper insurance coverage.

7. To continuously appraise economic and social forces, and government influences, and interpret their effect upon the business.

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The Controller

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Correspondence

CONTROLLERSHIP IN AUSTRALIA

Editors, THE CONTROLLER:

In going through a copy of the *Australian Accountant,* the April 1960 issue, I came upon an article that will interest anyone concerned with the evolution of controllership. Written by C. R. Hicking, the paper is entitled "The Accountant in Industry—Today and Tomorrow."

Discussing the accountant's place in present-day Australian industry, Mr. Hicking states:

"Since the results of management's efforts are finally revealed in the profit and loss account, the accountant in industry occupies a prominent place amongst the specialists to whom management looks for assistance, but his responsibilities lie far beyond merely carrying out his traditional recording function. He must be prepared to play an important role in relation to the decision-making process of management. To do this successfully, he must not only exhibit proficiency in accounting techniques but he must become management-minded, and must have a full appreciation of the basic objectives of management. . . ."

Further along, Mr. Hicking says:

"It is, of course, well known that the relationship between accounting and management has been more closely developed in America than in Australia, to such an extent that it has been responsible for the establishment of a separate business function, that of controllership."

The author appraises the extent of controllership now practiced in Australia with a reference to lectures by Professor W. J. Vatter in Australia. The professor, he says, spoke of three levels of controllership and pointed out that in its simplest form it is in reality an accounting job calling for the operation of a system to get factual data into financial reports. His second classification is at the level of budgets and forecasts, whilst the third he terms an "integral pattern of plans, standards and relationships so that the system established not only what has happened and what will happen but what ought to happen.

"I believe that the first and second levels of controllership as enunciated by the professor already are well established in Australia by reason of the equivalent functions carried out by the accountant in industry, and that in some instances the third level has been attained, as evidenced by the steadily growing number of accountants who, in the capacity of chief financial executive with titles such as finance director or financial manager are carrying out the wider functions mentioned by Professor Vatter."

M. R. JAMES
New York

GOOD BUDGETING

Editors, THE CONTROLLER:

In our budget work we would like the privilege of quoting from an article "Management Planning and Control" by R. B. Lewis. This article lists "The Seven Requirements of Good Budgeting" which we have found very useful.

W. J. SHORT
Allegheny Airlines
Washington, D. C.

The article referred to is not from THE CONTROLLER *but from an Annual National Conference booklet entitled "Controllership: Trends and Techniques" published in 1953 but now out of print. However, a copy is available in the library of Controllers Institute at Two Park Avenue, New York.* —*The Editors*

DO YOU AGREE or do you disagree with an article in this month's issue? Your fellow readers will be interested. Naturally, letters to the editor must bear the writer's signature and address; these will be withheld on request. The Editors

STATISTICS TEXTBOOK

Editors, THE CONTROLLER:

My co-author, Professor John Neter, and I should like to include certain material from your publication in a revision of our statistical textbook which we are preparing, titled *Fundamental Statistics for Business and Economics.* The tentative publication date of the revised edition is February 1961; the publisher is Allyn and Bacon, Inc., 150 Tremont Street, Boston 11, Mass. We should like to include material from the article "Graphic Analysis for More Effective Management Control," by Thomas S. Dudick published in the November 1958 issue of THE CONTROLLER.

DR. WILLIAM WASSERMAN
Brookline, Mass.

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Expected Cost—The Common Denominator

Stating costs of manufacturing at levels expected, to make for common understanding among management departments

Kenneth J. Murley

EVERY PRACTICAL CONTROLLER is, of course, well aware of the significance and limitations of the manufacturing cost figures he accumulates. Since assumptions and compromises are inherent in all cost figures, and since industry is usually in a state of flux, he can seldom be confident that his understanding is fully shared by others who use the figures. Sales, engineering, and production people, moreover, use these figures for different purposes and are each naturally inclined to emphasize different factors, leading to diverse interpretations of data based on what costs have been or what costs should be. The emphasis for these people is also on monthly operations rather than annual fiscal periods.

The sales department is concerned with the amount of cost to be recovered in selling prices in order to produce a profit, including considerations of volume and product mix. It wants to know how much it will cost to produce the goods for which selling prices are being set. It would also like to see the results of operations stated in the same terms as the assumptions on which the selling prices are set in order to clearly reflect the effect of pricing policies.

In cost control the emphasis is on what costs should be, although the standards of what costs should be will not be seriously accepted by operating personnel unless they are practicably attainable.

The production departments are primarily interested in an objective appraisal of the results of operations in the light of existing conditions. They want to know how performance compares to what should reasonably have been expected in the specific circumstances.

Top management must certainly give consideration to each point of view as it concerns current operations and in addition must be able to calculate realistically the future profit picture by product lines and at various levels of production and sales for planning purposes.

It will be seen from a review of the various requirements that there is a common denominator appropriate to all these purposes. It is evident that what costs will be, or what costs should be expected to be, is the most useful concept for stating manufacturing costs.

The expected cost concept permits the presentation of costs in the financial statements and operating reports on the same basis and in the same amounts as for sales pricing, cost control and planning, thus assuring a common understanding at all management levels.

Presented hereinafter are explanations of time-tested applications of this concept, followed by an hypothetical operating report and planning estimate, which summarizes the results.

COST STANDARDS

The standard cost method is a simplified method of bookkeeping based on the use of predetermined averages. This method permits cost determinations to be made at the time costs are incurred, thus eliminating delay in arriving at the cost figures. It is assumed that this method will be used in applying the expected cost concept for reasons which will become clear as the explanations progress. The predetermined averages will, of course, represent determinations of expected cost.

A slight inclination toward either an idealistic or pessimistic concept of what costs should be can produce quite divergent results. Engineering standards, however, adjusted to include variances which past experience shows to have been incurred are an excellent basis for expected cost standards, provided the data have been consistently compiled. Care must be exercised to make sure that the variances generated apply to all items equally. Tight standards will have caused more variances to be generated than loose standards, and to apply the same rate of variance to each will result in distortion. After adjustment for variances, the engineering data will be converted to expected cost by taking into account changes in prices and rates which it is known will occur during the period in which the standards will be used. Credence should not be given to contemplated improvements over past experience: it should be withheld until such improvements are an accomplished fact.

Reliable historical costs will also provide a good starting place for the establishment of expected cost standards. Remember,

KENNETH J. MURLEY is a controllers' consultant in Chicago, Illinois. He is a Michigan CPA with broad experience in industry and in public accounting. He is also associated with the Craig Agency, personnel consultants, of the same city. From 1951-59 he was with Bohn Aluminum & Brass Corporation in Detroit, Michigan; six years in the financial end of the business and two years as plant manager. The balance of his business career consists of 16 years in public accounting, with Touche, Ross, Bailey & Smart and White, Bower & Prevo.

however, that historical costs will include fluctuations in prices and rates which occurred during the period in which they were compiled. Also, bear in mind that historical costs are apt to include nonrecurring abnormalities. Although some abnormalities are common to every period, unusually high or low amounts should be carefully considered. Thereafter it is a relatively simple matter to adjust material prices and labor and overhead rates to take into account any changes which have occurred since the costs were compiled or are reasonably certain to occur in the period during which the costs will be used.

If neither engineering data nor historical costs are available, the original cost estimates for sales pricing purposes, appropriately adjusted, will serve as interim cost standards. In any case, the cost estimates should be compared to the standards as finally established and any differences explained and corrected.

Revisions of the detailed data compilations and the prices and rates to be applied should theoretically be planned to be made but once a year. However, price and rate fluctuations which were insignificant individually may accumulate to important proportions. If selling prices have not been changed to cover the changed costs, there is no problem because the variances do what they were intended to do, and that is to show the difference between the profit expected, at the time the selling prices were set, and the profit realized. If selling prices have been changed to cover one or two cost changes, a percentage or other rating factor can be applied to the costs computed in accordance with the detailed compilations, which are left as they were. Variances are recorded in accordance with the detailed compilations, but at the end of the month an appropriate overall amount is transferred from the variance accounts to cost of goods sold and/or produced. By this means the effect of the expected cost concept is maintained without the work of changing the detailed compilations.

No change in the balance sheet valuation of inventories is intended. The problems in this respect are generally the same as with any other cost concept. A device to minimize the effect of material price changes is to carry raw materials at acquisition cost (or whatever basis has been established) and to record the variances when the materials are put into production.

"Higgins, either your ledger shows a profit next month, or we get ourselves a new bookkeeper!"

Inventory gains and losses due to price changes should be segregated in the operating statement as nonoperating items, preferably in a separate section of the statement.

The handling of labor costs usually presents the greatest challenge to the accountant's ingenuity because of the detail involved. The simplest method of accounting for direct labor is to calculate the total expected cost of the operations performed in each department. This total expected cost is then compared to the total direct labor cost incurred in each department; the difference is treated as variance. If the expected cost standards are different from work standards based on time studies, the work standards are converted to cost standards before the variance is computed. This simplified method will not provide any tabulation of variances as to causes, but it is important to remember that the expected cost concept presupposes that variances will be insignificant. If the variances are important, the standards are wrong or some unusual and unexpected condition has occurred. If the standards are wrong they should be corrected immediately. Important variances should be explained in the weekly or daily cost report when it is published.

In summary, past experience modified by future expectancy may be stated as a general rule for the most satisfactory determinations of expected cost standards.

BUDGETS

It is in the area of manufacturing overhead that expected cost contributes most to a better understanding of cost accounting. To conform to the concept a budget must readily show the amounts realistically expected to be spent at any level of production volume. Since the amount of overhead, especially fixed overhead, is obviously much greater for an automated machining operation than for a manual assembly operation, for example, the budget must also take into account the specific product mixes comprising the various production volumes. Over a period of time sales must be substantially equal to production in a successful business, but seasonal and cyclical fluctuations in production are inevitable and are often counter to sales volume fluctuations. Comprehension of the monthly operating figures requires that the budget provide a means of showing the profit effect of such fluctuations.

The first step in the preparation of the budget is the determination of the capacity of each plant, center by center, and the enterprise as a whole. In the absence of positive knowledge that it will be different in the future, capacity should be based on past experience as to product mix. Capacity must be stated as a realistic optimum rather than as a maximum or ideal. In this connection the effective capacity in any cost center is limited to the output which can be utilized in the product mix for the enterprise as a whole. This does not present much of a problem as there are almost certain to be one or two cost centers, the output of which limits the output as a whole. The capacity as a whole is, therefore, based on the output of the limiting centers and that of other centers determined therefrom. Common sense will preclude the understatement of total capacity for lack of readily available equipment having a moderate cost. Also, the cost of any significant amount of capacity, which will not be utilized in normal product mix, will be transferred to a nominal cost center for idle equipment, in order to exclude such nonproduct costs from sales pricing. If capacity has been stated in terms of units of production it will be necessary to convert the units into dollars of sales, material costs and direct labor costs. Overhead will be found later by means of the completed budget.

Whatever the source of the capacity figures, they should be checked against past experience by projecting production at a known level (such as one full shift) to the capacity level.

Having arrived at optimum capacity, consideration must be given to the proportion of capacity which can reasonably be expected to be utilized on a long-term basis in an efficient operation. The proportion should not be less than would be

considered a satisfactory economic utilization of the facilities, and not more than could realistically be expected to be attained on an average, year in and year out. The proper proportion is a matter of judgment and is apt to be somewhat arbitrary, but probably should not be less than 60 per cent nor more than 80 per cent. This is an important determination because it sets the volume level at which overhead will be applied for costing and sales pricing. The idea is to pick a volume level which is reasonable and also consistent from year to year in order to avoid overcosting in periods of low production and to avoid giving away the advantages of high volume in periods of good production. This proportion of optimum capacity is referred to as budget base volume.

A separate budget will be made for each cost center. The expenses in the completed budget for each cost center will be shown as the amounts applicable to the base volume level and for the assumed product mix. Each element of expense will be divided into fixed and variable amounts so the expense at any level other than base volume can be computed as the fixed amount plus the applicable proportion of the variable amount. The variable amount will be directly related in the budget to standard direct labor (or an equivalent production base such as machine hours), and the proportions applicable to various levels of production will therefore be computed from standard direct labor cost of production. In addition to being the best stable base for measuring allowable variable expenses, the use of standard direct labor for this purpose will obviate any problems of product mix. Since standard direct labor is literally a budget for direct labor, one unit is equal to another as far as production within the cost center is concerned.

The budget at base volume for the enterprise as a whole will be simply the total for all the cost centers, and as the budget for the enterprise at any other level will be arrived at in the same manner, the actual production in the various cost centers will automatically yield the amount of expenses applicable to the total product mix actually experienced. Planning projections and profit forecasts can be adjusted for anticipated changes in product mix.

The division into fixed and variable amounts is based on the recognition that every element of expense has a minimum amount, regardless of the amount of production, and that anything over that minimum is the amount which varies. It will be found that the variable amount will vary at substantially the same rate as production varies. This may not be strictly true mathematically in every case, but as a practical matter it has been found that the difference is so small as to be inconsequential.

Understatements of the minimum or fixed amounts will result in overstatements of variable amounts, and vice versa, and are thus partially self-correcting. A highly precise division between fixed and variable is, therefore, not absolutely necessary, but it will be seen that in general a realistic determination of the fixed amount is essential to the usefulness of the budget. Fixed expense is not at all similar to shut-down expense. It is the minimum amount expected to be spent by a going concern in each cost center, plant, and the entire business regardless of the level of production. A good example of fixed expense uses as an illustration a bus making a regular run. The cost of making the run without passengers is the fixed expense, including gasoline, tire wear, repairs, depreciation, taxes, and so on. Variable expense is the amount of cost added when passengers are carried.

The attitude toward fixed expense may change from time to time inasmuch as it is the minimum amount expected to be spent. This amount might be considered to be larger, to provide and maintain an organization geared to an expected high volume, than it would be to provide for an anticipated low level. This attitude should not be permitted to have any important effect on the establishment of the amount of fixed expense, because the budget must be made to measure allowable spending in terms of actual attained production.

CYBERNETICS, SCIENCE AND CONTROL

[Cybernetics] provides a new dimension of management, a concept of control far in advance of anything hitherto considered by either managers or engineers. Its major technique is to employ models in a special way which makes science convenient to handle in an unusual situation. . . . In all this, it is specifically learning from biological features, and trying to emulate their key features. Thus the measure of the importance of cybernetics is the backwardness of society's present outlook on control, not the imagined ability of the science to build a superbrain.

—STAFFORD BEER, *Cybernetics and Management,* New York: John Wiley & Sons, Inc., 1959, p. 207.

It may be necessary to consider two or more expense accounts as one element of expense for budgeting purposes. For example, if a department has hourly rated group leaders in addition to salaried foremen, it is proper to assume that at a volume level too low to justify the full times of both, the foremen will be expected to perform the function of the group leaders part of the time, while the group leaders will be assigned to other duties.

Regardless of what might otherwise be considered as the minimum amount, the final test is whether total fixed expense for the cost center is so set that total variable expense will vary directly with production as measured by standard direct labor.

Past experience modified by future expectancy is the best approach to expense budgets as well as to cost standards. This is arrived at by first making a schedule of the past average monthly expenses and direct labor for each cost center, preferably for a period of at least a year. On the same schedule the amount of fixed expense is entered, after which the remaining or variable portion of the average expenses, together with direct labor, are projected to the base volume level. At this stage it is well to check the accuracy of the budget figures by selecting a high and low production month from past experience and to project the proposed budget to the attained volumes for those months, comparing the results to the recorded expenses. The expenses are then adjusted for any anticipated rate or price changes.

When the budget for each cost center has been completed and tested, the budgeted expenses for the indirect manufacturing or factory service departments will be allocated to the direct production departments based on direct labor, total labor, floor space, or other appropriate basis. This will permit the use of a burden rate for each direct production department which can be computed from standard direct labor and which will absorb all manufacturing expenses at base volume. No attempt should be made to repeat these allocations in the books of account, both because it is very difficult due to the usual succession of post-closing adjustments and because it is unnecessary. Where the expenses of such departments as Maintenance and Tool Room are normally redistributed based on direct charges for services performed (as they should be) it is preferable to record such redistributions. This is practical only if the charges are made at flat rates as determined from the budget, without attempting to take into account over- or under-redistributions each month.

It should be made very clear that the final responsibility for the budget is that of the head of the department for which it is made. The accountant performs a technical service in the preparation of the budget, but the service is performed for the department and it is the duty of the department head to review, understand and approve the budget after reconciling his differences with the accountant. The accountant cannot usually take the time to debate each detailed element of expense with each department head, but the more important items should be discussed. In doubtful cases it is a good idea to have supervision estimate the expense at half a full shift and also at three full shifts and see if the difference between the two represents the proper amount of variable expense. It may not, but what is learned is almost certain to lead to the proper amount.

Budget comparisons to expenses incurred should be made for each cost center, including indirect departments. This is done by listing the amount of standard direct labor or other measure of production or service and computing the amount of each variable expense therefrom. The amount of fixed expense is then added to the variable to arrive at the total allowable expense, which is then compared to the expense incurred. The accumulations for the year to date should also be shown. It is not practicable to make a full budget comparison for less than a month, but comparisons for indirect labor should be included in the weekly or daily cost reports.

Each department head knows in advance how much he is allowed to spend in relation to what he will produce and must be held accountable. The year-to-date comparison is obviously a much better criterion of performance than any one month. Unless the past experience on which his budget was based represents perfection, the department head can be expected to devote his efforts toward spending less than his budget allows, but the budget should not be in any way considered as a strait jacket. Supervision will certainly be expected to exercise good business judgment which will sometimes call for making expenditures in advance of the date of actual requirement. If his judgment is correct the year-to-date budget comparison will eventually show this to be so, and in the meantime his superiors are made aware of whatever deviations have occurred.

Past extravagances and inefficiencies will certainly be carried forward into a budget prepared in the manner described. They will, however, just as certainly be carried forward into current expenses unless effective means are found to prevent their occurrence. In the meantime, this budget provides the best practical measure of how much will be spent, which is a good guide to the most fertile field for cost reduction. The efficacy of cost reduction programs will be shown by the degree of reduction below what would otherwise have been expected. After the reduction has been established it will be taken into account in subsequent budgets.

As a final suggestion, if the budget for any cost center or the summary for any business cannot be included on one 8½ x 14″ sheet it should be concluded that there are too many expense accounts.

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RUSTY CARS HAVE SILVER LINING

Every time a railroad car that has been standing for any length of time is bumped, it sheds rust. Put together all the railroad cars that sustain bumps when moved from storage, and you get a quantity of rust that must be gotten rid of somehow. But it's no disposal problem for the railroads—they sell it, by the ton. This fact concerning cost control was brought out recently in a speech by William S. Story of the Institute of Scrap Iron and Steel.

OPERATING REPORTS

Following is an hypothetical comparative statement of operations which illustrates what a financial statement will show without the benefit of proper yardsticks:

(Percentages rounded off)

	January		*February*		*March*	
	Amount	*%*	*Amount*	*%*	*Amount*	*%*
Sales	$50,000	100%	$100,000	100%	$150,000	100%
Cost of goods sold:						
Material	$22,000		$ 45,700		$ 69,400	
Direct labor	4,900		10,300		15,700	
Overhead	7,100		26,000		44,900	
Total cost of goods sold	$34,000	68%	$ 82,000	82%	$130,000	87%
Gross margin	$16,000	32%	$ 18,000	18%	$ 20,000	13%
Selling, administrative and general expenses	10,000	20%	10,000	10%	10,000	7%
Income before federal taxes	$ 6,000	12%	$ 8,000	8%	$ 10,000	6%
Federal taxes on income	3,000	6%	4,000	4%	5,000	3%
Net income	$ 3,000	6%	$ 4,000	4%	$ 5,000	3%

These results of operations seem most peculiar because sales in the third month were three times as much as in the first month, but the percentage of profit is only half as much. Even in an operation as simple as that reflected by this statement the causes of the variations would be difficult to determine by subsequent analysis, and in a more complex operation would be practically impossible. The circumstances indicated are normal to all manufacturing operations, but are somewhat exaggerated for illustrative purposes.

Now look at the following statement which presents the same results of operations in conformity with our requirements:

(Percentages rounded off)

	January		*February*		*March*	
	Amount	*%*	*Amount*	*%*	*Amount*	*%*
Sales	$50,000	100%	$100,000	100%	$150,000	100%
Standard cost of goods sold:						
Material	$21,000		$ 45,000		$ 69,000	
Direct labor	4,700		10,000		15,300	
Overhead	11,800		25,000		38,200	
Total standard cost of goods sold	$37,500	75%	$ 80,000	80%	$122,500	82%
Standard gross margin	$12,500	25%	$ 20,000	20%	$ 27,500	18%
Manufacturing variances:						
Material	$ 1,000		$ 700		$ 400	
Direct labor	200		300		400	
Overhead:						
Volume variance	(6,000)				6,000	
Budget variance	1,300		1,000		700	
Total manufacturing variances	($ 3,500)	(7%)	$ 2,000	2%	$ 7,500	5%
Selling, administrative, and general expenses	10,000	20%	10,000	10%	10,000	7%
	$ 6,500		$ 12,000		$ 17,500	
Income before federal taxes	$ 6,000	12%	$ 8,000	8%	$ 10,000	6%
Federal taxes on income	3,000	6%	4,000	4%	5,000	3%
Net income	$ 3,000	6%	$ 4,000	4%	$ 5,000	3%

(Continued on page 312)

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1039 OFFICES IN 121 COUNTRIES • 76 YEARS OF HELPING BUSINESS SAVE MONEY

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National*

ELECTRONIC DATA-PROCESSING
ADDING MACHINES • CASH REGISTERS
ACCOUNTING MACHINES • NCR PAPER

The only apparent difference between the two statements is that the second shows cost of goods sold divided between standard cost and manufacturing variances. In this respect it is similar to the usual standard cost statement, but there are important differences.

Standard cost of goods sold is not an hypothetical and debatable concept of what costs should be, but is the expected cost on which selling prices were set. The variances are segregated in the statement to show the profit effect of the difference between expected costs and costs incurred.

Overhead volume variance reflects the profit effect of different levels of production. As previously explained, standard overhead was set from the budget based on the long-term expected volume. Therefore, standard overhead includes a proportion of fixed expenses which is assumed to be normal. When attained production is less than or more than the long-term expectancy, the proportion of fixed expenses included in standard overhead absorbed will be correspondingly less than or more than total fixed expenses as determined from the budget. Volume variance is the profit effect of the over- or under-absorption of total fixed expenses. Note that volume variance relates only to production volume in the period. The effect of sales volume is shown by standard gross margin. If beginning and ending inventories were relatively about the same, this distinction between sales and production volume would not be important over a long period, but it is essential to an understanding of the results for specific months.

Overhead budget variance is the difference between expenses incurred and expenses expected to be incurred at the attained production volume. This variance will be detailed in the budget comparison.

Standard gross margin is another informative figure in the second statement. Expected cost is a relatively constant amount with respect to each product. That is to say that it is constant in the absence of price changes, and relative to the changes which do occur. From this we know that the difference in percentage of gross margin has to be the result of a difference in product mix. Either a different proportion of various products was sold in each of the three months, or a different percentage of mark-up was applied to the same product. Sales and costs will usually be segregated in the statement by product lines which will more clearly reflect the difference in proportion of products sold. In addition, the method of accumulation of the figures should automatically provide a detailed analysis of gross margin.

Assume that the expected level of production is equivalent to $100,000 of sales, and that the overhead expected to be incurred at that level would be $25,000, of which $12,000 would be fixed. Also assume that, except for the manufacturing variances, the second month was a normal average month and using that month as a basis for comparison, the profits for the three months can be completely reconciled, as follows:

	January	*February*	*March*
Variations from normal profit:			
Variations in gross margin:			
On sales volume at a normal 20%	($10,000)		$10,000
From product mix—the difference between actual percentage of gross margin and a normal 20%	2,500		
Total variations in gross margin	($ 7,500)		$ 7,500
Manufacturing variances:			
Volume variance	$ 6,000		($ 6,000)
Operating variances	(2,500)	($2,000)	(1,500)
Total manufacturing variances	$ 3,500	($2,000)	($ 7,500)
Variation in income before federal taxes	($ 4,000)	($2,000)	—0—
Variation in federal taxes on income	2,000	1,000	—0—
Variation in net income	($ 2,000)	($1,000)	—0—
Normal income at normal sales volume	5,000	5,000	$ 5,000
Actual net income	$ 3,000	$4,000	$ 5,000

The foregoing reconcilement is included for convenience of discussion and is not suggested for actual use. In practice the reconcilement or comparison would be made to a forecast, and the term "normal" would not, of course, be used except under the assumed "normality" of the second month.

PLANNING ESTIMATES

Estimating profits at various levels of production and sales is a simple matter. Using the hypothetical data from the illustrative operating statement, the break-even point and potential profit of the business are calculated as follows:

Sales at base or expected volume			$100,000
Sales required to break even:			
Sales required to cover fixed expenses of $12,000 ($12,000 = 32%, see below)			$ 37,500
Sales required to cover selling, administrative and general expenses of $10,000 ($10,000 = 32%)			31,250
Total sales required to break even			$ 68,750
Sales left to produce a profit			$ 31,250
	Total at base volume	*Per dollar of sales*	
Variable cost per dollar of sales:			
Material	$ 45,000	$ .45	
Direct labor	10,000	.10	
Variable overhead	13,000	.13	
Total variable cost per dollar of sales	$ 68,000	$ .68	
Sales	100,000	1.00	
Amount of sales dollar left to cover fixed expenses, selling, administrative and general expenses, and to produce a profit	$ 32,000	$ .32	
Potential profit before federal taxes on sales of $100,000 ($31,250 as above, at 32%)			$ 10,000
Federal taxes on income			5,000
Potential net income on sales of $100,000			$ 5,000

It was assumed that manufacturing variances in the hypothetical second month were abnormal and nonrecurring (usually an unwarranted assumption) otherwise the profit picture would be changed accordingly. In making estimates such as the foregoing, the figures should be broken down by product lines and expanded to show fixed and variable expenses in total for each cost center or division, together with standard direct labor.

The simplicity claimed for making estimates such as the foregoing is not intended to imply that the actual results will conform to the estimate.

. . . . . .

BUDGETING FOR RESEARCH

The research budget helps to control expenses before they are incurred, rather than after the fact. In this respect budgetary control of R&D bears more similarity to control of advertising than it does to manufacturing cost controls. Of primary importance is the fact that the budget forces managers periodically to review research progress and to replan the program.—JAMES BRIAN QUINN in "Budgeting for Research," *Handbook of Industrial Research Management,* edited by Carl Heyel, New York: Reinhold Publishing Corporation, 1959, p. 282.

THIS ONE COMPUTER

will handle all four types of data processing

COMMERCIAL • SCIENTIFIC • MILITARY • INDUSTRIAL

The Philco 2000 Computer is the most versatile large scale data processing system available today. This one computer can handle efficiently all four major types of data processing problems, each usually requiring a different system.

The high speed input-output system updates an inventory of 500,000 items in less than 20 minutes; large complex scientific computations are now being solved in one fourth the time formerly required; and Philco 2000 Computers are now solving problems vital to the national defense effort.

The Philco 2000 is easily utilized for any of these applications. Parallel logic and asynchronous mode of operation permit expansion without costly changes in system design or existing programs. This extreme versatility is one more reason for the proven economy of the Philco 2000 . . . the computer that has changed the industry.

PHILCO CORPORATION • GOVERNMENT AND INDUSTRIAL GROUP
COMPUTER DIVISION, 3900 WELSH ROAD, WILLOW GROVE, PA.

PHILCO 2000 DATA PROCESSING SYSTEM World's First in All-transistor Logic and Circuitry

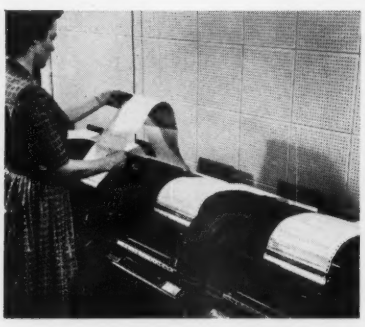
PHILCO®

Famous for Quality the World Over

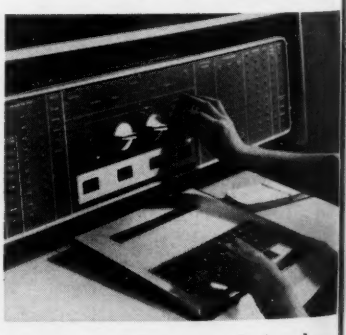
PROBLEM: to reduce truck "wait-time"... put Middle Atlantic shipments on "load-and-go" schedules

HOW WESTERN UNION SYSTEM KEEPS 14 TERMINALS UNDER ONE ROOF

Cargo Information speeds from New Britain switching center to any Middle Atlantic terminal in seconds. And everything's *in writing* . . . no mistake about it!



36 Hours In Advance, terminal managers get all necessary papers and forms; plan ahead for truck's arrival. Result? Faster service for every customer!



Using Original Tapes, punched card-computer systems process invoices, management data, profit-and-loss information. System prepares payroll for 800 employees.

SOLUTION:

A Western Union Private Wire System

Interested in streamlining every area of company communications, and in eliminating costly waste-time? Here's how Western Union helped solve both problems for Middle Atlantic Transportation Company.

Under the old system, trucks were held up while way bills and manifests were being prepared manually. Average "wait-time" per trip was a serious four hours . . . multiplied by 25,000 trips per year!

The solution? A Western Union Private Wire System, engineered to coordinate with Middle Atlantic's advanced data processing installation.

Today, this versatile private wire network—transmitting 400,000 words per day—links New Britain, Connecticut, general accounting offices with 14 Middle Atlantic Terminal points in eight Eastern and Midwestern states. Contact is instantaneous . . . and always *in writing.*

Cargo data, way bills, dispatching information . . . all data can now be sped "down the line" in seconds. Terminal points get information as much as 36 hours before the truck arrives. Result? Faster, more accurate planning, speedier customer service. Improved "load-and-go" schedules help *save an average of two to six hours per trip!* And, by using custom-engineered private wires, whereabouts of consignments can be determined *in minutes.*

Your company can probably benefit from a Western Union Private Wire System. It will be custom-tailored to your business alone . . . handle all company data with error-proof, *written* accuracy. It can save you time . . . and money. For all the facts, send a collect wire to: Western Union, Private Wire Division, New York, N. Y.

WESTERN UNION *. . . first in Private Wire Systems*

Fast Processing of Daily Orders

George Howard

Details of machine route accounting procedures for keeping retail dealers supplied

THIS IS AN ACCOUNT of the Breyer Ice Cream Division's experience in taking daily orders from a large number of customers, the system used, and the results obtained. Although our business happens to be the manufacture and distribution of ice cream, we feel our system can possibly be used by other industries having a sufficient volume of daily orders, requiring utmost speed in handling and processing.

THE DIVISION'S SETUP

The Breyer Ice Cream Division is a division of National Dairy Products Corporation. It is somewhat unique in that the only product it manufactures and sells is ice cream. It also has a fruit division which is mainly for its own use, to insure the best in quality and flavor. Other National Dairy divisions sell milk, ice cream, cheese, eggs, margarine, frozen foods, vegetables, fats and oils, jellies, candy, glass products or a combination of these.

The main office of the Breyer Division is located in Philadelphia, Pa., with two other manufacturing plants in Long Island City, N. Y., and one in Newark, N. J. From the Philadelphia plant, eight distributing branches are served, one from Long Island City and two from Newark. In total, the Division serves approximately 15,000 customers.

OUR OLD SYSTEM OF CUSTOMER ACCOUNTING

Inasmuch as we have daily deliveries, one of our most important problems is that of customer accounting. By the end of World War II, like many other industries, we were expanding greatly and it became increasingly important to depart from the antiquated system of hand posting that we managed to live with for over 80 years. Customer records were inaccurate, incomplete and never up-to-date. They required a large number of persons to maintain. Our division comptroller investigated the business machines of the larger manufacturers back in 1948. After careful thought and study he chose IBM, principally because that manufacturer offered the mark-sense feature. Our Division thus became the pioneer in our corporation, and in our industry, in the use of machine route accounting.

During the early post-war period, these machines could be used only for our Philadelphia operation, since high-speed computers were not on the market. A complete study was made of our business, lasting about five months. This proved most important. During the course of this study, a detailed picture of our business was obtained that enabled a better transition to the new system. To meet all conditions, the study pointed out, 120,000 price cards would be needed to do the necessary job of pricing customer invoices because a gang-punch operation was being used. After elimination of many unimportant factors, the number of price cards was reduced to about 3,000. This was still a cumbersome amount, but it was workable under the prevailing conditions.

While the new system was far superior to the old, it lacked sufficient speed and capacity to take care of the locations other than Philadelphia. It was also impossible to use many new applications that were planned in addition to route accounting. Then in 1950 an IBM 604 computer was installed to speed and simplify the operation as well as to add other applications requiring computation such as payroll. The 3,000 price cards were reduced to about 120. While a one-item detail card was formerly used, the IBM 604 enabled us to use a two-item detail card with the addition of our Newark operation to the system in September 1956.

By 1957 an IBM 650 computer and several data transceivers were ordered and in operation. The transceivers were able to transmit information quickly from outlying locations to Philadelphia, where the 650 was installed, and to receive other information back from Philadelphia. This is our present system and the one which will now be explained.

OUR PRESENT SYSTEM

In *Exhibit A* you will note CUSTOMER MASTER CARD printed on the right-hand side in a vertical position. This card is used over and over again and is only reproduced if there is a significant change, such as the days to be delivered, route change, etc., or if the card becomes sufficiently worn to require replacement. At such time it may be found advisable to

GEORGE HOWARD, a member of Controllers Institute, graduated from Girard College and after joining Breyer Ice Cream Division of National Dairy Products Corporation, Philadelphia, Pa., attended Evening School of Accounts and Finance, University of Pennsylvania (Wharton School), graduating in 1937. Since 1951 he has been comptroller of the New York District of the Breyer Ice Cream Division, Long Island City, N. Y. This article is based on a talk before the Methods and Procedures Committee of the New York City Control of which Mr. Howard is vice chairman.

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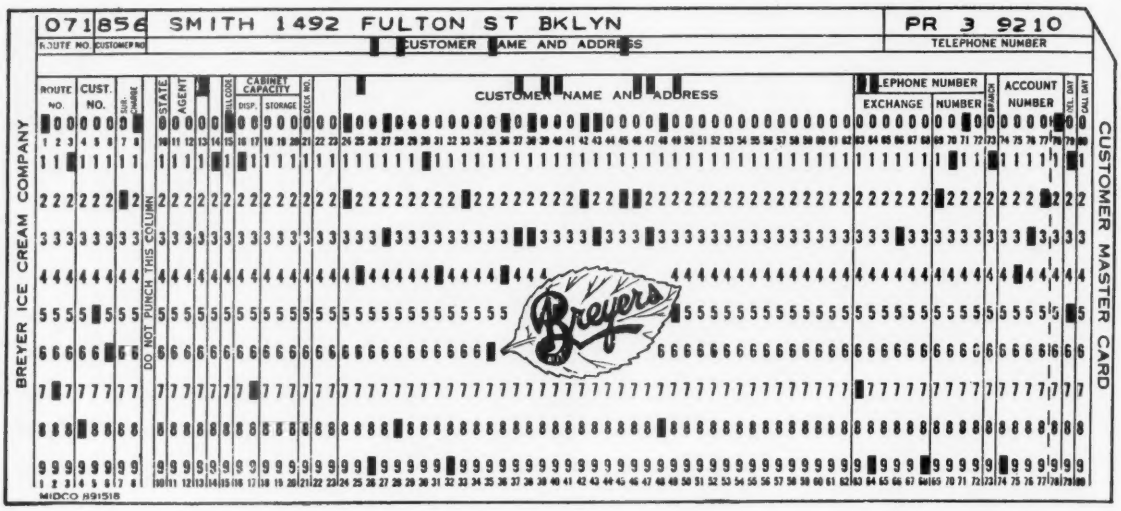
EXHIBIT A. CUSTOMER MASTER CARD



reproduce an entire new deck, as in the case of seasonal changes when our delivery schedule is revised.

Only the information necessary in taking a telephone order is interpreted on the card: route number, customer number, name and address and telephone number. Column 79, which is marked DELIVERY DAY, shows punches which represent the delivery days of the week, 1 meaning Monday, 2 meaning Tuesday, etc. On the card shown in *Exhibit A,* delivery days are 1 and 5, which signifies that the customer is to receive deliveries on Monday and Friday. All cards having 1 in column 79, or those to be served on Monday, are sorted out and sent to the telephone order department on Saturday, to be called for Monday delivery. The telephone order clerk dials the number as shown and proceeds to take the order on the detail order cards as shown in *Exhibit B.* All orders are taken in code with a mark-sense pencil. Each detail order card can handle ten flavors or products, since both sides of the card may be used if necessary. It has been noted that we progressed from a one- to a two-item detail order card with the use of an IBM 604 computer. With the IBM 650 a five-item card was used. Recently we began using the other side of the detail card for an additional five items with a card usage and transmission reduction to 65 per cent compared to a five-item card. Quantity is self-explanatory (quantity always being in units). The first position of code refers to product and the last two positions of code refer to flavor. For example, a 10-quart can of vanilla is 101, while a half-gallon unit of vanilla is 201. The 01 signifies vanilla, while the first position of code 1 signifies a 10-quart can and 2 signifies a half-gallon unit.

The detail order cards are placed behind the customer master card and must be kept in that position until they enter the 519 reproducing punch. This machine takes the required information from the customer master card and punches this information to each succeeding detail order card. The following information is punched from the customer master card to the succeeding detail order cards:

Columns 1 to 3—ROUTE NUMBER.

Columns 4 to 6—CUSTOMER NUMBER (or sequence of delivery number on route).

Columns 7 to 8—SURCHARGE (This is a percentage of the total dollar amount of invoice to be collected for repayment of a loan or other collection items.)

Column 15—BILLING CODE (In this case zero signifies a cash customer.) Other punches signify accounts receivable customers and the type, such as school, monthly account, weekly account, etc.

Column 73—While the word BRANCH is printed on the card in this column, it is used as the price code. (In this case 1 signifies regular wholesale price.)

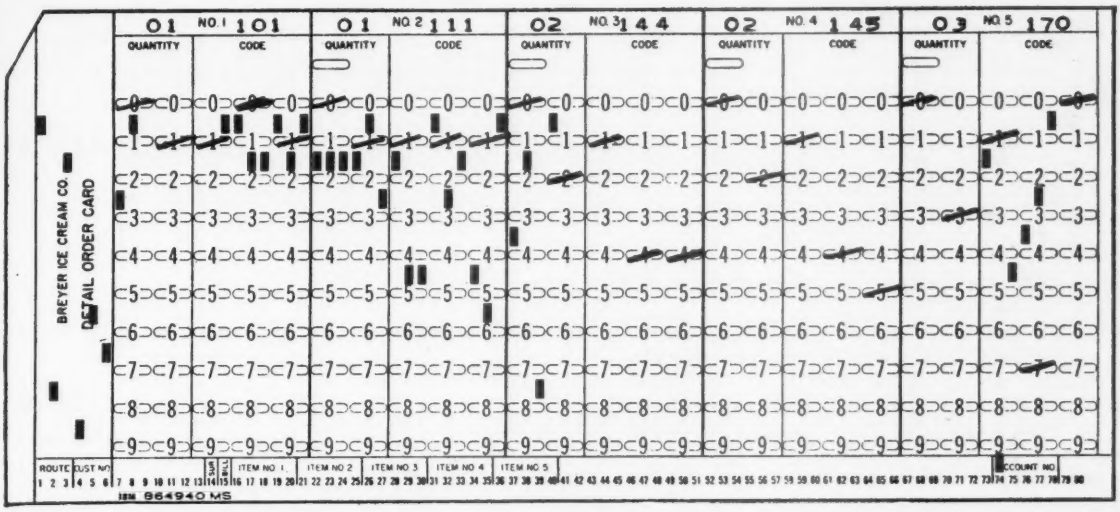
Columns 74 to 78—ACCOUNT NUMBER (Permanent number of customer.)

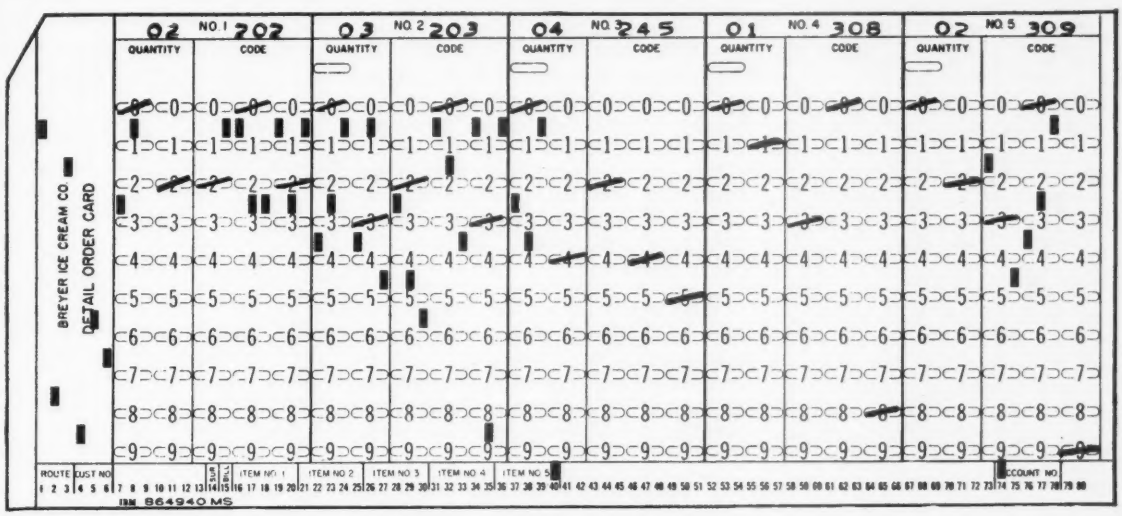
The 519 reproducing punch also picks up the pencil marks on the detail order cards and transfers them to holes so that they can be properly processed by the other machines used. Note on the bottom of the cards in *Exhibit B,* columns 16 through 40, which cover all the punch marks on the card resulting from the pencil marks in *Exhibit B.* In *Exhibit B* you will note that the punch marks have been interpreted on the cards. This is not normal procedure, but used only as a guide for this presentation. The 519 punches, on the average, 100 cards per minute and stops if a card is not properly marked or if an omission is made. In such a case the machine operator can usually make the necessary correction. After punching, the cards are sorted on one sort (column 13), extracting the customer master cards from the detail cards at a speed of approximately 800 cards per minute. The customer master cards are later filed with the rest of the deck, to be used over and over again, as explained previously.

The detail order cards are then placed in the data transceiver and sent by telephone wire to the EDPC in Philadelphia at the rate of 16 cards per minute. Cards are sent beginning about 1:00 p.m. to about 6:00 p.m. and the telephone line is used for voice during the morning and can be used for voice or card transmission throughout the rest of the day and evening.

After the last card is sent, other cards are received back on the same data transceiver for use in preparing load sheets so that by 9:00 p.m. the loading of the trucks can be started. The reason cards can be received immediately after the last card has been sent is that early routes have already been entirely transmitted by about 4:00 p.m. and have been processed by 6:00 p.m. One can readily see that this is a very tight daily operation. Any serious trouble means interruption to our delivery schedule with a resulting high payroll cost, as well as customer dissatisfaction. *(Continued on page 320)*

EXHIBIT B. DETAIL ORDER CARDS





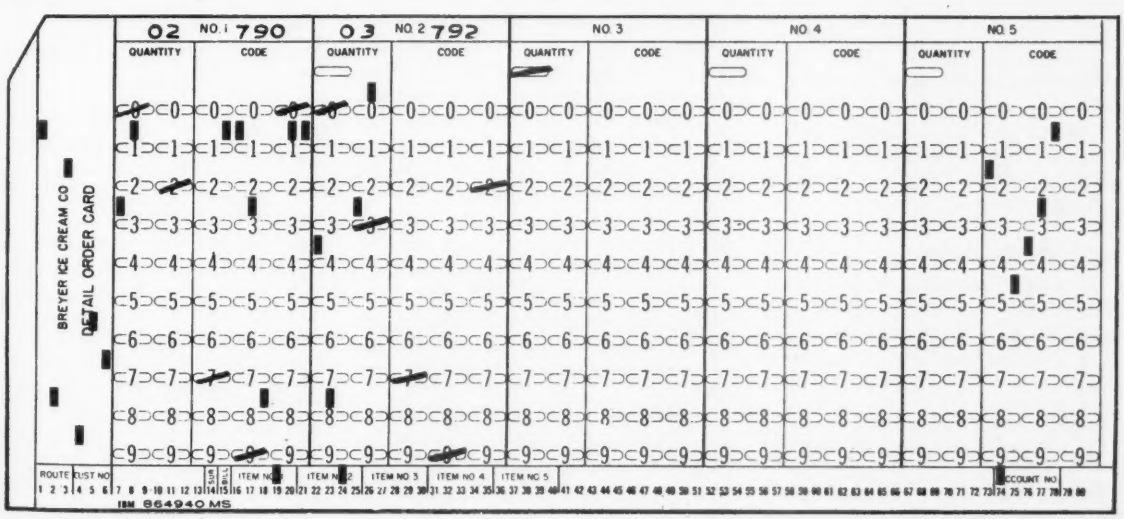
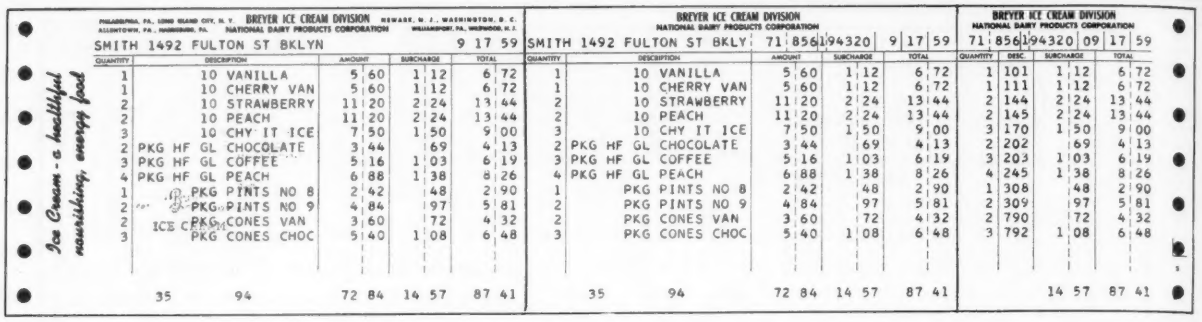


EXHIBIT C. CUSTOMER BILL



BREYER ICE CREAM DIVISION — NATIONAL DAIRY PRODUCTS CORPORATION — PHILADELPHIA, PA. · LONG ISLAND CITY, N. Y. · ALLENTOWN, PA. · HARRISBURG, PA. · NEWARK, N. J. · WASHINGTON, D. C. · WILLIAMSPORT, PA. · WILDWOOD, N. J.

SMITH 1492 FULTON ST BKLYN — 9 17 59

QUANTITY	DESCRIPTION	AMOUNT	SURCHARGE	TOTAL
1	10 VANILLA	5 60	1 12	6 72
1	10 CHERRY VAN	5 60	1 12	6 72
2	10 STRAWBERRY	11 20	2 24	13 44
2	10 PEACH	11 20	2 24	13 44
3	10 CHY IT ICE	7 50	1 50	9 00
2	PKG HF GL CHOCOLATE	3 44	69	4 13
3	PKG HF GL COFFEE	5 16	1 03	6 19
4	PKG HF GL PEACH	6 88	1 38	8 26
1	PKG PINTS NO 8	2 42	48	2 90
2	PKG PINTS NO 9	4 84	97	5 81
2	PKG CONES VAN	3 60	72	4 32
3	PKG CONES CHOC	5 40	1 08	6 48
	35 94	72 84	14 57	87 41

Ice Cream - a healthful nourishing, energy food

BREYER ICE CREAM DIVISION — NATIONAL DAIRY PRODUCTS CORPORATION

SMITH 1492 FULTON ST BKLY | 71 856 194320 | 9 17 59

QUANTITY	DESCRIPTION	AMOUNT	SURCHARGE	TOTAL
1	10 VANILLA	5 60	1 12	6 72
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3	PKG HF GL COFFEE	5 16	1 03	6 19
4	PKG HF GL PEACH	6 88	1 38	8 26
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2	PKG PINTS NO 9	4 84	97	5 81
2	PKG CONES VAN	3 60	72	4 32
3	PKG CONES CHOC	5 40	1 08	6 48
	35 94	72 84	14 57	87 41

BREYER ICE CREAM DIVISION — NATIONAL DAIRY PRODUCTS CORPORATION

71 856 194320 | 09 17 59

QUANTITY	DESC	SURCHARGE	TOTAL
1	101	1 12	6 72
1	111	1 12	6 72
2	144	2 24	13 44
2	145	2 24	13 44
3	170	1 50	9 00
2	202	69	4 13
3	203	1 03	6 19
4	245	1 38	8 26
1	308	48	2 90
2	309	97	5 81
2	790	72	4 32
3	792	1 08	6 48
		14 57	87 41

Customer bills are prepared in Philadelphia on a Tab at the rate of 150 lines per minute and returned to the source location by messenger. One messenger drives to Newark and Long Island City, another to Baltimore and Washington and still another to Harrisburg and Allentown, Pa. Messengers must arrive before trucks leave with their loads. Smaller branches, or those too remote to be reached by messenger, are not on this system.

Exhibit C shows a customer's bill, which is a three-section form. The large section on the left is given to the customer, the middle section is retained by the driver who obtains signatures on accounts receivable customers and the right section remains in the office. Upon examination of the right section, which is in code, it will be noted that the code is the same as the pencil marks shown on the detail order cards in *Exhibit B.* To simplify this presentation, the customer Smith's order is used as a full load. It should be borne in mind, however, that a true load may consist of 20 or 25 customers. The load sheet, *Exhibit D,* is used for loading trucks and for checking loads and is prepared from cards transmitted from Philadelphia to the various locations where the 402 Tab is used for preparing them at the rate of 50 lines per minute. Whenever a load appears too small, two or more routes will be combined. In this case where Smith's order is used as a full load, you will also note the same items as shown on the customer detail cards, *Exhibit B.*

A SIMPLE PENCIL MARK

In our system, everything begins with a simple pencil mark. *What, then, can the pencil mark do or finally help to accomplish through machine accounting?* It can

1. Record customers' orders.
2. Properly price and prepare customer bills.
3. Prepare load sheets and load summaries to expedite loading and driver's settlement.
4. Prepare debit entries to accounts receivable file.
5. Prepare credit entries to surcharge collection file.
6. Prepare monthly gallonage records for each customer by sales territory.
7. Reduce clerical cost, both at the point of calling customers and in proving sales.
8. Prepare annual volume discount records for check preparation.
9. Furnish complete book ice cream inventory records daily, showing opening balance, production, returns, sales, adjustments and closing inventory.
10. Ascertain formula product usage from daily production, which is compared with actual usage. This is not a mark-sense operation, but a simple key-punch procedure.

The highlights of our system have been briefly described. The most important features of our order-taking and customer-record procedure have been mentioned. Tabulating machines are also used for the following additional information:

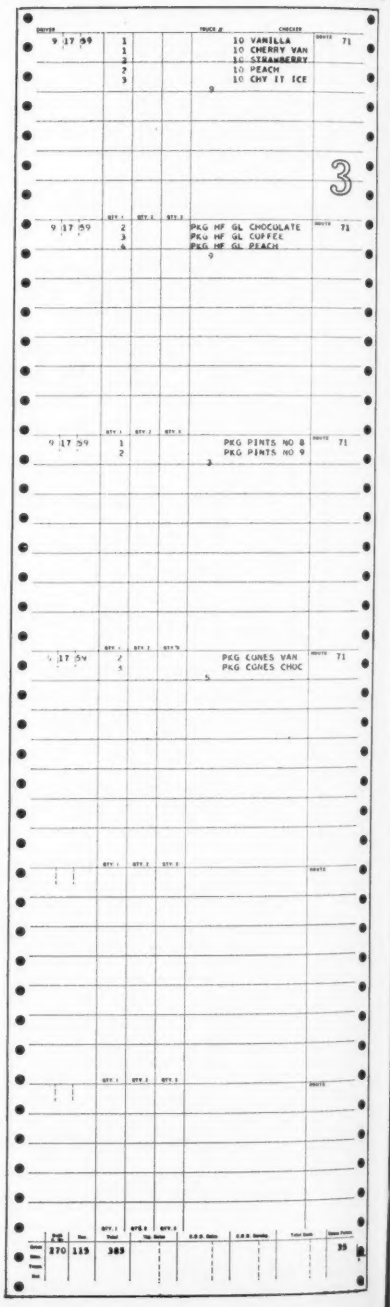
1. *Payroll*—Here we only punch department number, employe number and gross amount. The data transceivers transmit payroll cards and the other machines in Philadelphia do the rest, also preparing necessary quarterly reports and W-2 forms. We use card checks and these checks are returned from the bank sorted in numerical order for ease in reconciliation. Time cards are also prepared on IBM cards and when the payroll is tabulated, the second copy becomes the time sheet for the following week.

2. *Farmers payroll or milk patron settlement sheet*—Checks are issued twice monthly to about 1,500 farmers and the price and necessary deductions are computed.

3. *Accounts receivable statements*—Most debit items are received as a direct result of our order-taking procedure. Other entries for cash collection, returns, etc., are key-punched.

(Continued on page 334)

EXHIBIT D. LOAD SHEET



Clerical Work Measurement Keyed to Modern Equipment

L. O. Sweval

Standardized data help in achieving labor savings with new office "hardware"

IRONICALLY, the explosion in clerical employment that we have seen in recent years has taken place during a great expansion in the use of mechanical and electronic office equipment. Many have learned the hard way that the acquisition of more office hardware is not necessarily synonymous with labor savings. In their late-1959 survey of 278 companies, ranging in sales volume from $1 million to more than $100 million, Dun and Bradstreet reported that costs of increased paperwork activities were rising 35 per cent to 40 per cent faster than sales increases.

Too often, the attempt has been made to automate a mess. In the process, new labor burdens have been created—on top of old ones. We know, however, that the new hardware makes it possible to meet the many demands for control information in today's competitive business world.

Fifty years ago, Frederick Taylor stated the well-known axiom that "to control, you must first measure." He then proceeded to develop the only measuring medium possible for work methods and labor expenditure—time and motion measurement. His principles of time study became the foundation of manufacturing labor cost control. Since Taylor's time, the industrial engineer has consistently improved and simplified the techniques and standard data designed for specific applications. It is the application of these latter techniques to paperwork that enables us to take full advantage of modern office equipment.

Realization that the methods used to measure work in manufacturing could be applied to clerical tasks has not come all at once. Nor has it come without some confusion over the particular methods and data to use.

FIRST APPLICATION OF WORK MEASUREMENT DATA

The search for new ways to cope with the growing volume of paperwork began with some of the major insurance companies, a number of years ago. They looked to manufacturing operations for assistance and took a number of pages from the book of industrial engineering techniques. It was not long before they became convinced that the progression of time study through its various steps to specialized standard data was the most promising route toward the reduction and control of paperwork costs. These insurance companies set their plans accordingly and for the next several years proceeded to develop data specialized for their individual needs.

The results were described in a number of papers presented before management societies. Many articles on the subject were published. Generally, savings ranging from 10 per cent to 30 per cent were attributed to use of the specialized data. When these savings became known, wide interest was aroused.

Unfortunately, copies of the insurance companies' data found their way into too many hands. When unskilled persons attempted to apply these work measurement data to jobs other than those for which they were intended, naturally they got nowhere. Disillusionment followed. As is the case all too often, the techniques themselves were condemned and discarded, when the real trouble was misapplication.

RECOGNIZING NEED FOR STANDARDIZED DATA

After these experiences, the use of data faded, with only a few of the very large companies continuing their development and use. Meanwhile, several consulting firms reviewed the pros and cons of standard data for use in controlling office costs. They concluded that the data approach to work measurement was superior to other techniques because of greater accuracy, less cost and more acceptability from a human relations standpoint. Recognizing the error of turning individual specialized data to general use, they developed standard data which would be adaptable to *all* basic clerical activities.

From such an approach, Office Manning Controls, or as it is most often referred to, "OMC," came into being. With a set of well-known predetermined basic method data, method analyses were made of every conceivable manual function that could be performed in paperwork operations. This work required approximately 20 industrial engineering man-years. The resulting reams of studies were condensed and consolidated into a set of 50 data charts. Two examples of these charts are shown in *Charts A* and *B*.

L. O. SWEVAL, director of Special Services for Profit Counselors, Inc., New York management consultants, is well known for his studies on clerical work measurement. He is responsible for the development of Office Manning Control, a method of clerical standard data discussed in this article. Before joining Profit Counselors, he was a member of the consulting staff at Burlington Mills Division of Burlington Industries, Inc., and a vice president and principal of H. B. Maynard & Company, Inc., where he directed the firm's European consulting assignments.

CHART A

OFFICE MANNING CONTROLS

Data Chart - Open and Close Desk Drawer

DRAWER	DISTANCE OPENED OR CLOSED	OPEN DRAWER	CLOSE DRAWER		OPEN AND CLOSE
			HAND IN OR AT DRAWER	HAND OVER DESK	
Center	Part 6"	.018	.010	.012	.028
	Full 12"	.037	.033	.036	.070
Side - Top	Part 9"	.023	.015	.022	.038
	Full 18"	.027	.023	.028	.050
Side - Lower	Part 9"	.025	.015	.023	.040
	Full 18"	.029	.023	.030	.052
File Drawer	Part 9"	.032	.020	.028	.052
	Full 20"	.036	.028	.035	.064

Motion	Initial Reach to Drawer	Work Place	Desk
Pattern	Terminal Release Drawer	Equipment	
Operation	Open and/or Close Desk Drawer	Chart No.	1.61

The top chart is an example of a common operation performed in every office. To illustrate its use: if you, while seated at your desk, reached to your top side drawer and opened it fully—18", it would take .027 minutes. The time to open and close the drawer would be .050 minutes. These times, as well as all time values shown on OMC charts, include a 15% allowance to cover the human element, fatigue, etc.

•

In the illustration below a typical filing operation is broken down first into major work elements; OF-1 and OF-2. These elements are then analyzed individually. The motion or method elements are listed for each. An OMC data reference number is shown with a brief description of each activity and information concerning frequencies recorded. This information identifies the data time value to be used. The individual time values are then totaled to arrive at per order filing time of .416 minutes. Besides producing a time standard, this makes an excellent and complete record of method.

CHART B

OFFICE MANNING CONTROLS

Order and Invoice Filing Methods and Standard Record

	PER ORDER OR PER INVOICE =	
OF-1	Obtain material for filing	.002 Minutes
OF-2	File	.414
	Time Standard	.416
OF-1	Obtain material for filing =	
	Walk 20 Feet (.005 per foot) (round trip)	.073
1.11	Pick up material (25-L-4)	.044
		.117
	Allowed at 1/100 per invoice	.002
OF-2	File =	
4.31	Identify order (1-3)	.041
	Move to file drawer (6 files - 4 side steps) - .041 (Allow at 1/4)	.010
1.62	Open and close file drawer = .105 (Allow 1/4)	.026
2.11	Find Folder (D-0-26 to 50)	.140
2.12	Remove folder, mark place, reinsert	.168
1.11	Place sheet in folder (S-25-3)	.029
		.414 Minutes

In a number of recent applications of this OMC data to different types of businesses, with office staffs ranging in size from 25 to more than 1,000, it has been found that the data cover 85 per cent to 95 per cent of all paperwork activities.

The general opinion is that work measurement's chief value, as a cost-control instrument, is in the development of production standards or quotas. These standards provide a means of proper scheduling of work by allocating personnel to the expected work load. They also provide a means of evaluating the effectiveness of individuals against a standard rather than against one another.

SYSTEMS AND PROCEDURES DESIGN ANALYSIS

In the analysis of systems and procedures design, time units supplied by standard data provide an element of measurement which is usually missing in such analysis. To illustrate, the product designer has units of measure such as inches, feet, pounds, gallons, etc. Having these makes it possible for him to put on paper several different solutions to any problem or suggested change in products. When these different solutions or drawings are placed side by side it is possible to select the best solution for any of a number of reasons, such as material consumption, labor requirements, or facilities availability. All this can be done before any production costs are accrued. Costly experimental methods are eliminated. *(Continued on page 345)*

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Depreciation Allowances Not Fully Utilized

W. Joseph Littlefield
Research Director
Controllers Institute Research Foundation

Relatively few companies are taking full advantage of chances to reduce tax payments and preserve cash by using both types of accelerated depreciation permitted

UPON ANALYSIS of responses to a questionnaire circulated recently by Controllers Institute Research Foundation, it has become evident that many companies would find it advantageous to review their depreciation policies. A relatively low proportion of firms are maximizing their opportunities to benefit from provisions of the Tax Code of 1954, regarding accelerated depreciation.

Responses to the questionnaire, which came from representatives of every major industry, totaled 1,325. Of those responding, 23 per cent indicated that they are using the straight line on cost method of depreciation for tax purposes, and are therefore not taking advantage of the law permitting an accelerated form of depreciation. Of the remainder using accelerated depreciation, 45 per cent use the declining balance method (double straight line on declining balance), while 38 per cent follow the sum of the years formula and 17 per cent employ both methods.

The questionnaire which was sent was an outgrowth of inquiries by members of Controllers Institute as to the type of depreciation used in corporate accounting and for P&L statements to stockholders. Replies showed many differences in policy. In what follows, these differences will be described in some detail and commented upon for their significance.

For brevity we refer to "sum of the years digits" method of depreciation as the SOYD method, and the method using "double straight line on declining balance" as the "declining balance" method. Also for brevity we use the phrase "tax difference" to mean (for a single year) the difference in income taxes between using straight line depreciation and using one of the accelerated types of depreciation. This appears to be common terminology, but its use herein does not imply that straight line depreciation is a "standard" either as a measure of the proper amount of depreciation or for the proper determination of net profit. This tax difference may be plus or minus.

The term "normalization" is used to refer to the practice of charging or crediting to earnings an amount equivalent to the difference between the amount of income taxes on a straight line depreciation basis and on an accelerated depreciation basis, with concurrent credits or charges to an account on the liability side of the balance sheet.

PRACTICES COMMON TO ALL

Certain practices are common to most, if not all, respondents:

1. It appears that all companies use the same amount of depreciation in reports to stockholders as is accrued on the books.

2. Most companies find that some depreciation claimed for tax purposes, and used in reports to stockholders, is disallowed when tax returns are audited. Thus

DOES CANADIAN PRACTICE POINT WAY TO REVISION OF U. S. DEPRECIATION PROVISIONS?

Making the best of present U.S. federal allowances for depreciation is one thing; considering the type of changes which might improve these provisions is another. Many Americans have spoken out in favor of Canadian depreciation practices. Joel Barlow, partner, Covington and Burling, Washington, D. C., says:

"Our outmoded tax depreciation structure has left us with a much higher obsolescence factor in industrial plants than that of England or West Germany, our principal competitors in world markets. A modified Canadian system or bracket method with realistic class rates would create the climate for the more rapid economic growth which we need to keep pace with our international competitors, including Russia."

WHAT STUDY OF CANADIAN SYSTEM DISCLOSED

Not so long ago, the American Economic Foundation made public the findings of a study of the Canadian depreciation system. These were as follows:

"The Canadian economy is perhaps the closest parallel in the world to that of the United States. Both are developing economies, are self-sufficient to about the same extent, and have about the same type of population. The balance between agriculture, the extractive industries, and manufacturing is not quite the same, but it is a fair approximation.

"In Canada, the tax liability at actual rates, as well as the constant rate, varies in almost direct proportion to corporate profits indicating no hardship on the national treasury.

"At the same time, the amount of depreciation shows a steep and regular rise.

"The relationship between profits and tax liability stays practically constant.

"The Canadian revenue authorities were forced, in 1951 and 1952, to raise corporate income taxes in order to produce an effective rate of over 50 per cent but were able, in spite of the large and growing depreciation allowances, to again reduce the rate in 1959.

these companies in later years found that some depreciation could be used for tax purposes which had already been deducted from earnings reported to stockholders.

3. Of course, the various accelerated types and rates of depreciation permitted by revisions of the revenue act during the '50s can be used for tax purposes only for capital expenditures made subsequent to the revisions, and then only for certain types of expenditures. Thus most companies continue to use straight line depreciation for assets purchased prior to 1954.

4. Many companies have qualified for fast write-offs of capital expenditures under the defense effort (five-year certificates of necessity). This is a special-purpose depreciation which is usable only for qualified expenditures in connection with the defense effort. Very few certificates are now being authorized. Hence, we do not consider this as a special category for the purposes of this report.

TABULATION OF ANSWERS

Disregarding differences in practice mentioned above which may be common to all, the respondents fall into five groups as follows:

Group A About 23 per cent of all respondents (a total of 303) use straight line depreciation based on cost for all purposes, to calculate income taxes, for corporate books and reports to stockholders. Most of these use annual depreciation based on years of life, but 14 companies use depreciation measured by production for facilities to which it is applicable.

Groups B, C and D These three groups include 75 per cent of all respondents (a total of 999) all of whom use one or more of the accelerated types of depreciation for tax purposes. Group B is the largest with 732, or 55 per cent of the total, the members of which use the same accelerated depreciation for all purposes. (This is the method approved by the American Institute of Certified Public Accountants, in Accounting Research Bulletin #44.) In Group C there are only 7 per cent of the total (89 respondents) who use straight line depreciation on the books, and carry any tax difference to earnings. (This method is approved by the AICPA only under certain rare conditions—Paragraph 8 of Bulletin #44—or where the amounts are not material.) In Group D are 13 per cent of all respondents (a total of 178) who also use straight line depreciation on books and for reports, but who follow another procedure approved by the AICPA (Bulletin #44) by either (a) setting up a provision for deferred taxes, or (b) by adding the tax difference to the depreciation reserve or to a special reserve; in either case, normalizing by charging an amount equal to the tax difference to earnings, so that net earnings will be the same as though the procedure of Group A were followed.

Group E The practices of 2 per cent of the respondents (a total of 23) do not fall into one of the other categories, for reasons which in most cases are peculiar to their industry.

Canadian Group In Canada depreciation on declining balance is permitted but at rates established by law.

DEPRECIATION OF FACILITIES

For years engineers have claimed that straight line depreciation, whether measured by time or production, fails to offset the decrease in earning power of a facility. The technical advances of the past 20 years which obsoleted many machines and processes added weight to this argument. Even though not permitted for calculating income taxes, some companies accrued depreciation at a faster rate on their books to reflect properly the decrease of earning power with usage of a facility, and with the passage of time.

EFFECT OF INFLATION

As a result of inflation which followed World War II, it seems apparent that no method of depreciation will provide adequately for the recovery of purchasing power invested in facilities purchased prior to 1960. Some form of special allowance is needed for this purpose, but this subject is outside the scope of this report.

SELECTION OF DEPRECIATION

The various revisions of the revenue act in the United States since World War II were an attempt to satisfy the demand for rates which more nearly measure the decrease in earning power of facilities, and to encourage investment in capital facilities. Many companies believe that these revisions fail to meet the need, but that they are better than straight line rates, especially considering the lives permitted. There appears to be a wide difference in policy and practice among the various enterprises which sent answers to the questionnaire. *(Cont. on page 328)*

"The pattern of capital formation in Canada shows a rough agreement with both the corporate profits and the tax liability, the principal difference being that, about the time that the liberalization of depreciation took place, capital formation began a steep upward climb.

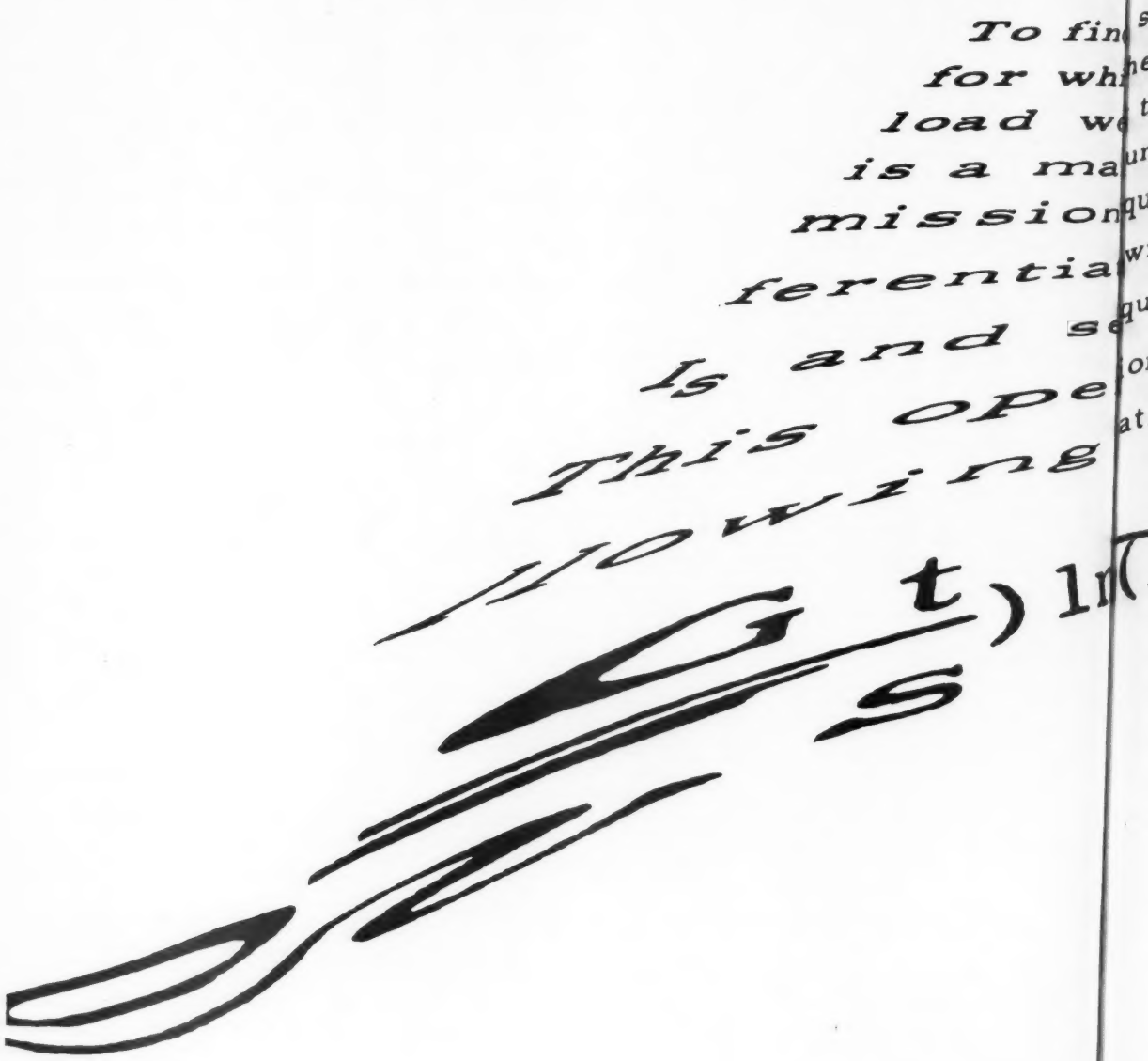
"There were undoubtedly other factors affecting capital growth and corporate taxes in Canada, but when it is considered that depreciation is equal to over 50 per cent of corporate profits in Canada, and has been equal—on the average—to about 40 per cent of corporate profits in the United States for the past five years, the influence and impact of the depreciation deduction must be recognized as probably the most powerful and significant factor in both the tax and capital growth picture."

The American Economic Foundation pointed out that the findings on the Canadian system were based on the results of 15 years' experience. Canada revised its depreciation laws in 1946 and again in 1949.

Since the close of the Korean War this country has been unable to reduce the corporate rate of 52 per cent. Even though there were statutory provisions requiring it to be reduced to 47 per cent, the 52 per cent rate has been extended from year to year. The total effective tax rate for corporations in this country is about 45 per cent, higher than the effective Canadian rate of 43.9 per cent.

Under the Canadian system, all depreciable property is grouped into 17 separate and broad classes. Depreciation rates are assigned to each class, and these rates are applied across the board to everything in the class. Each rate is set high enough to encourage expansion and replacement. No attempt is made to assign a useful life to any particular machine or other asset.

Under the Canadian system, all machine tools, for example, are grouped together in a single class for tax purposes. The rate assigned this class is 20 per cent. In the United States, rates are as low as three per cent.



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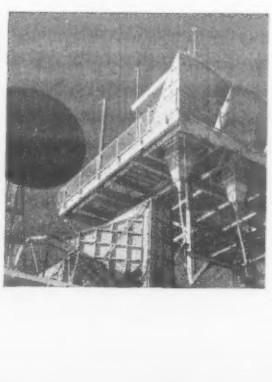

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Many of those in Group A stated that there was too little difference between the amount of depreciation permitted by the accelerated types and straight line depreciation to make it worth while to make the change. Others in this group believe that making the change would result merely in a tax deferral which would not be significant in size. Others may have problems which do not make the change feasible; some of these problems are discussed below under "tax accounting."

The position of those in Group B seems to be quite different. Believing that accelerated depreciation more nearly measures the decrease in earning power of facilities, and that lower depreciation later in life will be offset by higher operating costs, this group uses accelerated depreciation for all purposes. This practice results in lower net income than if the practice of those in Groups A, C and D were followed; but the cash generated through reduced tax payments is the same as by the procedure followed by Groups C and D, and higher than for those in Group A. These respondents apparently believe that their reports properly state net profit.

Those in Group C use accelerated depreciation for calculating income taxes, but use straight line depreciation on their books and in reports. This means that as long as depreciation figured by the accelerated method is higher than straight line depreciation would be, the net profit reported will be greater than that reported by following any of the other procedures. Some of these enterprises believe that depreciation calculated by the accelerated method they use will never fall below straight line depreciation, and hence that the tax reduction will continue to accumulate indefinitely, assuming no change in the tax law.

On the other hand those in Group D believe, apparently, that any tax reduction is merely a deferred tax because they either set up a provision for deferred taxes or add the tax difference to a reserve for depreciation or other reserve. The net profit reported by this group would be the same as though straight line depreciation were used throughout.

Here we have various policies, and the question is: *Can they be reconciled?* Perhaps this question can be answered by examination of the conditions under which the tax reduction is merely a relatively short deferment of tax, and the conditions under which the tax reduction constitutes a long-term deferment into the indefinite future.

TAX DEFERRAL OR PERMANENT "TAX SAVING"?

What is the difference in conditions under which we would have either a relatively short-term tax deferral or what may appear to be a permanent tax saving?

To answer this question we can study two cases, each an extreme.

Case I If an enterprise makes a single large capital expenditure for a facility, and uses accelerated depreciation for tax purposes, obviously the amount of depreciation will be greater early in the life of the facility than it will be later. There will be a tax reduction early in life, which will be offset by a tax increase later. At the end of life of the facility, the total depreciation by the accelerated method will be the same as though straight line depreciation had been taken, and the total of taxes paid will be the same by either method of depreciation. (Assuming, of course, no change in income tax rates.) Such a company would probably assume that the tax reduction in the early life of the facility is really a deferred tax, and that there is no permanent tax saving.

Case II At the other extreme we may visualize a company which meets the following characteristics. It has made annual capital expenditures of equal amount for facilities of the same average life. It has made these expenditures for a long enough period so that the first facilities purchased are being replaced. It continues to replace facilities with capital expenditures (not expense expenditures).

Assuming no detrimental change in the tax law, if such a company shifts from straight line depreciation to one of the accelerated forms, then as it replaces facilities a tax deferral will accumulate, which during one average life will reach a maximum which could be as high as 8 per cent (with a 52 per cent tax rate) of the total expenditures for replacing all facilities.

Moreover if this company continues to spend the same amount for facilities each year then another tax deferral will accumulate which could also be as high as 8 per cent of capital expenditures made during another average life. With sum of years digits method, and with no salvage value, depreciation would never fall below depreciation calculated with straight line rates as long as the stated conditions obtain. (Declining balance depreciation might in some years fall below straight line depreciation, partially offsetting higher depreciation in early years.)

Under these circumstances such a company might regard the accumulated tax deferral as permanent. However there are certain eventualities to consider. If there is quite a significant deviation from the characteristics outlined above, then part of the tax deferral becomes due. For instance if any facility is not replaced by a new facility involving a new expenditure which is capitalized as soon as it is fully depreciated, then the company will start paying back some of the tax deferral immediately. Moreover if accelerated depreciation is no longer permitted for tax purposes, then the accumulated tax deferrals will be paid back over the average life of the facilities. However, the exact amount of the tax deferral is not known. The tax difference is the correct amount only if the company pays taxes at 52 per cent of earnings before income taxes in later years. The tax payable in a later year will be higher if the company pays a higher rate of taxes and lower if a lower rate; it could be nothing in a year in which a company has no taxable earnings.

These two cases are extremes. The situation in some companies is closer to Case I, while in others it is closer to Case II.

(Continued on page 351)

Dates Ahead

MARK YOUR CALENDAR

AUGUST 28-SEPT. 1	TAX EXECUTIVES INSTITUTE	WHITE SULPHUR SPRINGS, W. VA.
OCTOBER 10-12	NABAC, The Association for Bank Audit, Control and Operation 36th Annual National Convention	LOS ANGELES
OCTOBER 10-12	SYSTEMS AND PROCEDURES ASSOCIATION International Systems Meeting	NEW YORK
OCTOBER 19-22	AMERICAN RECORDS MANAGEMENT ASSOCIATION Annual Convention and Records Management Workshop	MILWAUKEE
OCTOBER 22-26	CONTROLLERS INSTITUTE OF AMERICA 29th Annual Conference	SAN FRANCISCO

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Frank S. Capon Elected President of Controllers Institute

FRANK S. CAPON, treasurer, Du Pont of Canada Limited, Montreal, Quebec, Canada, was unanimously elected president of Controllers Institute of America for 1960-1961, effective September 1, 1960. The election took place at a meeting of the Board of Directors on June 11 in Milwaukee, Wisc., in conjunction with the Institute's 1960 Midwestern Area Conference held at the Schroeder Hotel.

The new president, the first Canadian to hold this position, has been a member of Controllers Institute since 1947. He served on its Board of Directors in 1949-1952. He was chairman of its Joint Committee on Controllership Research in 1951-1952 and served on the Planning Committee in 1956-1959. A charter member and first president of the organization's Montreal Control, in 1948-1949, he served as general chairman of the Institute's Northeastern Area Conference held in that city June 16-18.

Born and educated in England, Mr. Capon came to Canada in 1930. After several years with the Montreal accounting firm of Riddell, Stead, Graham & Hutchison, he joined Canadian Industries Limited in 1938. Starting as a clerk in the secretarial department, he was advanced to assistant treasurer in 1946 and to treasurer in 1949. When the company was divided in 1954, he was appointed secretary and treasurer of Du Pont of Canada. He was elected a director in 1957.

Mr. Capon, who holds a C.A. degree, is active in the Institute of Chartered Accountants of Quebec. He is a director of St. Mary's Hospital, Montreal; a member of the Engineers Club of Montreal, Mount Bruno Golf and Country Club, and the Mount Royal Club.

Mr. Capon is known to the readers of THE CONTROLLER for his article entitled "Essentials of Corporate Planning," published in the May 1960 issue and for "Recognizing and Evaluating Profit Opportunities" published in the October 1957 issue.

Roger A. Yoder Is New Chairman of the Board of Directors

ROGER A. YODER, vice president-finance of Detroit Steel Corporation, Detroit, Michigan, was elected chairman of the Board of Directors of the Institute for 1960-1961 at the meeting of the Board in Milwaukee on June 11.

Mr. Yoder, who has been affiliated with the Institute since 1941 served as a director, 1955-1958 and as a regional vice president, 1956-1958. His committee work includes vice chairman of the Institute's Executive Committee, 1956-1957, and chairman of the Planning Committee, 1953-1955. He also served as a trustee of Controllership Foundation (now Controllers Institute Research Foundation), 1958-1959; as president of the Detroit Control, 1950-1951; and as Institute president, 1959-1960.

In connection with the 1952 Annual Conference of the Institute, which was sponsored by the Detroit Control, Mr. Yoder served as chairman of the Program Committee.

A native of Illinois, he attended public schools in Decatur, Illinois, and graduated from Millikin University in the class of 1928, receiving a B.S. degree in Commerce and Finance.

Following a period as specialty salesman for the Northern Paper Mills, Green Bay, Wisconsin, he did graduate work in business administration at the University of Illinois.

In 1932 he joined Ernst & Ernst, Detroit, as a staff accountant and became a certified public accountant (Michigan) in 1934. Resigning from Ernst & Ernst in 1940, he became financial and accounting officer of Detroit Steel Corporation, a basic steel producer with executive offices in Detroit. Here he successively served as comptroller, secretary-treasurer and vice president-finance, receiving the latter designation in 1956. He has been a director of his company since 1944.

He is a member of the American Iron and Steel Institute; the American Management Association; and the American Institute of Certified Public Accountants.

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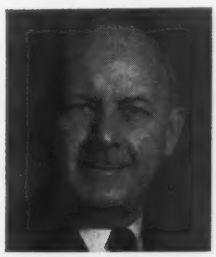

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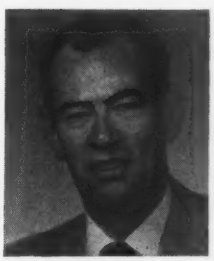

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J. McCALL HUGHES MADE INSTITUTE DIRECTOR AT LARGE

J. McCALL HUGHES

J. McCALL HUGHES, executive vice president, Mutual of New York, New York, was made a director at large of Controllers Institute at the meeting of the Board of Directors held in Milwaukee, Wisc., on June 11. Mr. Hughes who has been a member of the Institute since 1945 served as chairman of the board, 1959-1960; as president, 1958-1959; as a national director, 1951-1954; as chairman of the Admissions Committee, 1950-1951; and as chairman of the Planning Committee, 1956-1958. In this latter capacity, he rendered great service to the Institute by directing the Planning Committee's work on Institute Reorganization and Development of a Strong National Program. He also served Controllership Foundation (now Controllers Institute Research Foundation) in the following offices: Trustee, 1952-58; vice president, 1953-1954; chairman of the Executive Committee, 1952-1954; and president, 1954-1956. After graduating from Brown University, Mr. Hughes spent five years with Bankers Trust Company, New York, and then was with Mercantile Trust Company, St. Louis, Mo., for four years before joining Mutual of New York in 1943 as administrative assistant to the executive vice president. He was appointed associate controller in 1944; in 1945 he was appointed controller and in 1952 became vice president and controller; he moved up to executive vice president in 1959. Mr. Hughes is active in many of the life insurance professional associations such as the Life Insurance Association of America, the Life Underwriters Association of New York and the Life Office Management Association. He is also a member of the Academy of Political Science.

"How do you start a Pension Program?"

That's a question that seems to stop any number of companies that would like to institute some sort of retirement program — but just don't know quite how to go about it.

To try and help, we've prepared a new booklet called ***"Planning an Employee Retirement Program."***

Not that we're bankers or actuaries. We're not. But over the years now we've worked so closely with so many of both that we do feel comfortably familiar with the corporate problems involved. In our opinion this booklet goes a long way towards providing the right answer for any company that wants it.

The booklet begins with a brief history of pension plans, explains their constantly growing importance to American business.

It describes the various types to choose from, tells about qualifying them for maximum tax advantages. It takes up the two major methods of financing, has a detailed exploration of trusteed plans—explains the role that balanced portfolios can play—and the kind of securities that make them up.

The booklet provides sensible advice on long term investing, a clear-cut example of the power of *dollar* cost averaging, and time-tested suggestions on the next steps to take in setting up a sound retirement program of your own.

If you'd like a copy, we'll be happy to mail one. No charge, of course. No obligation, either. Simply address—

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Keeping Up with Explosive Growth

EXHIBIT I

AMERICAN FOODS, INC.

DRIVERS TRIP LOG RECORD

Truck #62 **DALLAS**

DATE	TRIP	DESTINATION	TRIP RECORD DOZENS		MILES	TRUCK	DRIVER	TOTALS TO DATE TRUCK	DRIVER	TOTAL
MAY 1959	1,768	KANSAS CITY	1,100.00	1	503					
		ST.JOSEPH,MO.	1,200.00	1	52					
		SPRINGFIELD,MO.	1,600.00	1	227					
		DALLAS			430	303.00	119.33+2	2,441.82	758.16	3,199.98

EXHIBIT II

TRIP LOG

AMERICAN FOODS, INC.

Truck's Base Dallas Trip No. 1768

Date of Departure May 25, 1959 Date Returned May 30, 1959

Name of Driver George McBride Truck No. #62

Destinations	Book Miles	Invoice Number	Dozens Delivered SM	BM	Brand Name	Temperature Load	Del'd
Kansas City	503	15512	500	600	Sun-Lite	46°	35°
St Joseph Mo	52	15599	600	600	Hom-Maid	46°	36°
Springfield Mo	227	15650	300	1000	Top Flite	46°	34/37°
RETURN	430	XX	"A"	"B"	X X	X	X
TOTALS	1212	XX	1900	2200	TOTAL DOZENS A+B 4,100		

Driver's Comments on trip: Warehouse Superintendent at Springfield commented on excellent quality of our beauties. Said would let wife buy any other kind.

ACCOUNTING DATA

Drivers Wages:
Dozens 4100 ÷ 2 = 2050 X .005¢ = $ 10.25
Total Book Miles 1212 X Drivers Rate $ .09 = 109.08
Amount due driver for trip.....$ 119.33

Truck Lease Cost:
Total Book Miles 1212 X Lessors Rate $ .25¢ = 303.00
TOTAL COST OF TRIP.....$ 422.33

TOTAL COST OF TRIP 422.33 ÷ TOTAL DOZENS DELIVERED 4,100 $ .10¢
Delivered Cost per Dozen

1/15/59 AFI 207

IN LITTLE MORE THAN a year of operation, we have grown from a small 45-employe firm to a 240-employe business, says D. H. Meenach, president of American Foods, Inc., Dallas, Texas. We now have plants in Dallas and Atlanta. We have expanded the facilities of both plants several times and are at present again enlarging the Dallas plant.

Our production capacity has doubled in the last six months. Sales for our first quarter averaged $120,000 a month. Now, they are well above the $600,000-a-month mark.

During this lightning-like growth we constantly revised our accounting methods. Month after month the current method would become obsolete. We were not keeping up to date. Statistical information and sales reports were never completed in time to offer any assistance to management. No one knew which customers were placing large orders or which ones were paying their bills promptly. This was not the fault of anyone, but rather the inability to push pencils fast enough to keep pace with our expansion.

As this problem became more acute, we were advised by our accounting firm to investigate the possibilities of machine accounting.

At their suggestion we studied the equipment and systems available to fit our needs and decided to purchase a Burroughs Typing Sensimatic Accounting Machine. Within a short time one operator was handling our entire general accounting function on this machine. In fact, she became so efficient that we were able to expand her duties until she now supplies complete figure information on every facet of our business.

The operator now prepares all the reports for accounts payable, including check writing, accounts receivable, payroll and payroll reports, 941A's and W2's, and

EXHIBIT III

CHANCELLOR ROW SUPER MKT.

AMERICAN FOODS, INC.

ACCOUNTS RECEIVABLE LEDGER

Customer CHANCELLOR ROW SUPER MKT.

Address 10500 CHANCELLOR ROW

City and State DALLAS, TEXAS

TOTALS-TO-DATE-IN-DOZENS					DATE	TOWN	REFERENCE	PRODUCTS-SOLD-IN-DOZENS				ACCOUNT-IN-DOLLARS		
TOTAL	SWEETMILK	BUTTERMILK	CORNMEAL	CHEESE				SWEETMILK	B. M.	CORN	CHEESE	CHARGES	CREDITS	BALANCE
3,500	1,000	2,000	300	200	AUG 21	CIN	44,788	1,000	2,000	300	200	8,040.45+		8,040.45*
8,300	3,000	4,000	800	500	AUG 22	KAN	44,789	2,000	2,000	500	300	10,050.21+		18,090.66*
35	20	10	3	2	AUG 24	CIN	244	20	10	3	2	479.00-		17,611.66*
					AUG 26	CS	108						8,040.45-	9,571.21*
8,265	2,980	3,990	797	498	AUG 26									

sales analysis reports for daily, weekly, monthly and yearly sales, and the accounting work for our Credit Union.

When we receive an order from a customer we immediately prepare a driver's trip log *(Exhibit I)* filling in all information pertinent to the shipment. From this a customer's invoice for each stop is noted on the trip log *(Exhibit II)*. These invoices are then dispatched along with the trip log to the warehouse, and the driver is ready to make his deliveries.

When the driver completes the trip he returns the signed invoices and trip log to the office and the accounting machine operator transfers the information to the driver's record. To accomplish this she places the record in the machine, indexes the trip number, types in the destination, indexes the products delivered, miles per destination, calculated truck lease cost, and the driver's wages. The machine automatically prints this information on the record and dates it.

The operator then selects another program on the machine, which automatically updates the individual year-to-date totals for the truck plus the combined total costs for delivering the order.

The purchase order, copy of the invoice and trip log are attached together to update customer's accounts receivable records.

EXHIBIT IV

DAILY REPORT

AMERICAN FOODS, INC.

Date 8-1-59

		ATLANTA	DALLAS
1	Cash Balance	$ 1,076,532.20	$ 387,541.12
2			
3	Sales (Net)		
4	Dozens	11,946 XX	3,740 XX
5	Amount	$ 10,409.08	$ 3,032.60
6	Average Price Per Dozen	$ .902	$ .896
7			
8	Collections	$ 8,580.03	$ 39,105.79
9			
10	Account Receivable Balance	$ 115,184.41	$ 244,017.04
11			
12	Production in Dozens	15,536 XX	2,084 XX
13			
14	Accounts Payable Balance—Total	X X	$ 102,812.12
15			

Updating accounts receivable records *(Exhibit III)* is as simple to prepare as was the driver's record. The operator places the ledger into the machine carriage and types from the invoice, the destination, indexes the reference number, dozens per product delivered per destination, returned dozens (which are printed in red), charges and credits. The machine automatically prints the date, as before, as well as the indexed amounts and then automatically extends and prints the balance owed by the customer. The machine then prints the total dozens per product delivered to date, and a proof figure. This proof figure proves the accuracy of every

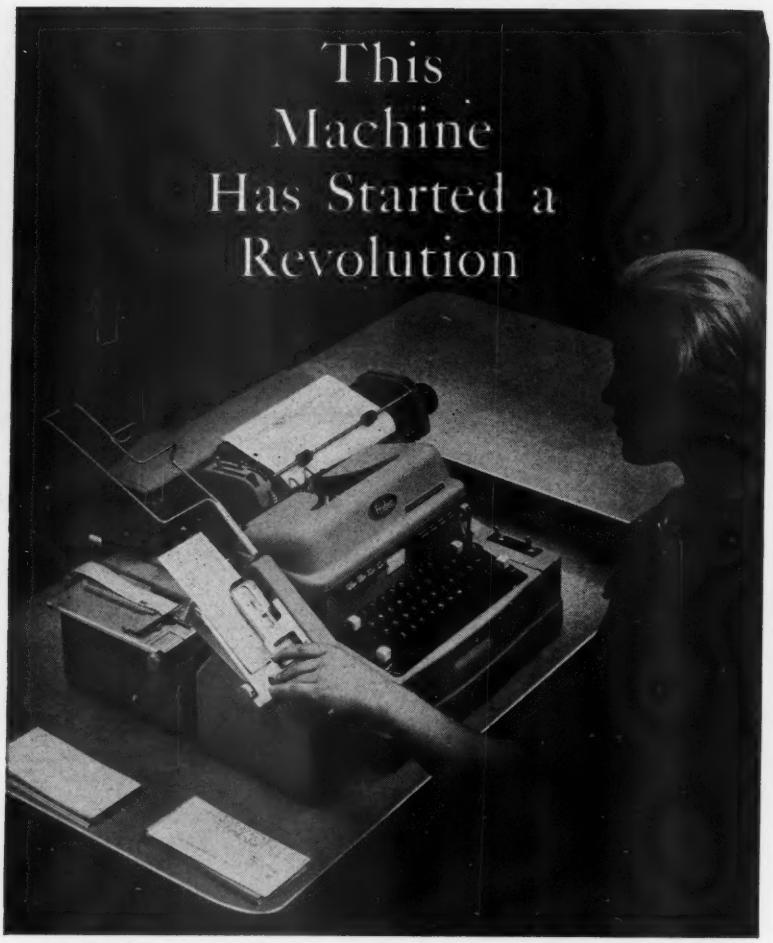
EXHIBIT V

WEEKLY SALES REPORT

American Foods, Inc.

From (Date) AUGUST 17, 1959 To (Date) AUGUST 21, 1959

NAME OF CUSTOMER	SWEETMILK				BUTTERMILK				CORNMEAL				CHEESE				%	TOTAL DOZENS		
	Sales	Returns	Net Sales	Year to Date	Sales	Returns	Net Sales	Year to Date	Sales	Returns	Net Sales	Year to Date	Sales	Returns	Net Sales	Year to Date		Week	Month	Year to Date
MILLER SUPER MARKETS	3,000	20	2,980	2,980	4,000	10	3,990	3,990	800	3	797	797	500	2	498	498		8,265	8,265	8,265
ROSS SUPER MARKETS	2,000	10	1,990	1,990	3,000	5	2,995	2,995	700	1	699	699	400		400	400		6,084	6,084	6,084
F. C. STONES INC.	1,000	40	960	1,100	5,000	78	4,922	8,972	800	4	796	1,296	600	4	596	1,596		7,774	13,944	13,944
	6,000	90	5,910	9,050	12,000	93	11,907	13,957	2,300	8	2,292	3,300	1,500	6	1,494	2,992		21,603	27,313	28,293



It's called the Friden Programatic Flexowriter. Here it is being used to write sales orders. After inserting a pre-punched card in the reader, the operator touches a key. The machine writes in the entire heading at a speed of 100 words per minute, pausing only to let the operator insert the date.

Next, the girl inserts a card for the first line item on the order. She enters the quantity, and the machine completes the line while she selects the next card. *As it writes*, the machine automatically punches selected information into a paper tape. Later, this tape can be used in any of three ways: 1) Run back through the Flexowriter to produce a complete written summary of orders, 2) Fed into a Friden Computyper to prepare *invoices* automatically, 3) Fed into a card punch to prepare a tab card for each order. (Or, when required, the Flexowriter itself can directly control tab card punching.)

Blue sky? Not on your life. This new system of document writing is working beautifully in hundreds of offices here and abroad. Your Friden Systems Man can give you the full story. Or write: Friden, Inc., San Leandro, California.

THIS IS PRACTIMATION: automation at the source of the data, automation so hand-in-hand with practicality there can be no other word for it.

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posting, for if an error should occur, the machine will detect and print it.

Preparation of sales analysis reports has become a simple operation with the aid of the previously prepared ledgers. In fact, it is simply a job of copying the daily total onto a daily report, *(Exhibit IV)* then transferring customer's sales to a weekly report *(Exhibit V)* which includes month and year to date totals of dozens delivered and returned, sales in dollars, and sales by product.

Payroll and accounts payable are handled with similar ease and speed. Related records, all computations and much of the work are automatic. On payroll, for example, the employe's check, statement of earnings, earnings history ledger, and payroll journal are prepared simultaneously.

We don't know how much more we can assign to this machine. However, we are constantly required to increase our staff, our facilities, our efficiency, and our line of products. Every increase requires additional information for management's responsibilities and our present accounting system will continue to provide this information.

Processing of Daily Orders

(Continued from page 320)

4. *Ledger covering our largest asset, electric cabinets*—This ledger is run quarterly showing, by equipment number, the value and location of all equipment, cabinets and compressors.

5. *Activity file* showing location, by store, of all electric cabinets.

6. *Complete customer mailing list file.*

7. *Accounts payable and expense distribution,* as well as central payment of all vendors' invoices.

8. *Trial balance* for preparation of financial statements.

Newer and faster machines will eventually speed and simplify our present procedures. Plans call for a 4,000-word drum and high-speed punch to be installed on the 650 in November 1960. This will provide a greater degree of pricing flexibility. By late 1961 or early 1962, a 7070 data-processing center is to be set up which will enable data processing for several additional divisions at one location. Perhaps most important of all, these improvements will furnish management with the reports necessary for proper decision-making in a fraction of the present time.

DISTRIBUTION COST ACCOUNTING

by F. M. EISNER, C.P.A.

Describes in detail a complete and thoroughly tested system—from original sources to preparation of statements for cost reduction and performance controls—reveals weak spots in major areas, such as: labor, inventory, salesmen's costs, sales mixture, factory and marketing expenses, small orders, office salaries, equipment utilization, returned goods, credits, etc. 554 pp. $12.50. **Charles M. Eisner, 70 Linda Ave., White Plains, New York.**

LONG SHOTS & CLOSEUPS WITH THE CONTROLLER CAMERA

San Francisco, Calif.

TOP RIGHT

The Executive Committee for the 29th Annual Conference of Controllers Institute meets as plans round into shape. Members of the San Francisco Control, which is sponsoring the Conference to be held October 22-26, are *(left to right seated):* Roy N. Dreiman, vice chairman; John J. Hartmann, Housing; James N. Kirkwood, Reception (vice chairman); Thomas W. Parham, Arrangements; Leonard K. Beckers, Industry Round Tables; Robert W. Johnson, secretary.

(Standing left to right) W. T. McGillivray, Inter-Control Attendance; Glenn K. Mowry, Ladies Hospitality; Duncan I. McFadden, Program; W. R. Thomas, vice chairman; Stanley B. Murray, general chairman; H. Douglas Holcomb, Ladies Hospitality (vice chairman); J. Philip Nathan, Finance; and David K. Ellison (not a member) filling in for Howard Leif, Registration.

Others on the Committee not present for the picture include John K. Griffin, Publicity; John R. Lavinder, Business Show; Kenneth R. Rickey, Reception; and John A. Braun, Speakers Hospitality.

Philadelphia, Pa.

"Certificates of Appreciation" were presented to past presidents of the Philadelphia Control of Controllers Institute at the 25th anniversary celebration held at the Philadelphia Country Club on June 3.

Receiving his certificate is *(second from left)* Daniel H. Schultz who was president of the Philadelphia Control, 1937-38. Presenting the certificate *(second from the right)* is Institute President Roger A. Yoder, vice president-Finance, Detroit Steel Corporation. Watching the presentation are J. McCall Hughes *(left)*, chairman of the Board of CIA and executive vice president, Mutual of New York; Edward M. Blanchard *(center)*, president of the Philadelphia Control, 1959-60, and treasurer, Arcos Corporation; and *(right)* Joseph F. Di Fulgo, president-elect of the Control, 1960-61, comptroller, Luria Brothers & Company, Inc.

RIGHT CENTER

Thirteen of the past presidents and their wives at the Country Club dinner.

Milwaukee, Wisc.

LOWER RIGHT

Participants at the recent North Central Area Conference of Controllers Institute compare notes during the afternoon coffee break. On the left is W. Joseph Littlefield, research director of Controllers Institute Research Foundation, who spoke on "The Controller's Relation with Other Departments." In the center is Roger A. Yoder, president of Controllers Institute, and on the right is Claude W. Hupp, a director of Region VI and controller, Glenmore Distilleries Company, who presided at the session at which Mr. Littlefield spoke.

AT THE BANQUET HEAD TABLE are (left to right): Maurice E. Griffin, director Region V; Reverend Board, invocator; Marion M. Johnson, general chairman of the Conference; Roger A. Yoder, president of Controllers Institute; Dr. Laurence Hall, banquet speaker; Edward H. Eaton, Area vice president and presiding officer at the banquet; James L. Peirce, past president of CIA; Paul Haase, managing director, CIA; C. K. McCracken, director Region VI; Claude W. Hupp, director Region VI; and Eugene R. Heiles, director Region V.

CIA North Central Area Conference High Spots:

- **Sure Yardsticks of Executive Performance**
- **Controller's Role in Uncovering Problems**
- **New Use of EDP in Operations Research**

CONTROLLERSHIP lore was augmented significantly at the Bluegrass (North Central Area) Conference of Controllers Institute of America, held May 22-24 in the Kentucky Hotel, Louisville, Kentucky. Subjects taken up by the speakers at technical sessions ranged from executive appraisals and operations research to the controller's relations with other departments. There were also two work-session seminars on "Cost Control and Budget" and "Long-Term Planning." The gathering was sponsored by the Institute's Louisville Control.

HOW TO MEASURE EXECUTIVES' WORK

Scoring excessive reliance on intangibles when appraising executive performance, John O. Tomb, principal in McKinsey & Company, Inc., Chicago, urged the adoption of "practical, realistic and tangible" yardsticks which truly reflect the individual's continuing contributions and provide an equitable basis for incentive compensation.

"Intangible factors like ability to plan, to make decisions, to organize current operations, and so forth, have received entirely too much consideration in devising performance appraisal programs," Mr. Tomb declared. "They are susceptible to wide swings in interpretation, depending on the individual who does the rating and on his own personal set of values. Furthermore, the characteristics that often lead to a low rating on some of these intangible factors may, in fact, be the very traits that produce unusual success.

"I have in mind the chairman of a large corporation who is extremely poor at long-range planning, but who has an unusual knack for making highly intuitive—even impulsive—decisions that have led to extremely profitable results. The president of another company operates a one-man show of the worst kind, but possesses rather unique personal-leadership and product-development skills which have generated outstanding profit results. A third top executive has a general reputation for almost complete lack of emotional stability. But he is highly resourceful and intuitive, both in terms of share of the market and profit improvement."

Inadequate appraisals penalize both the executive and the company, the speaker pointed out, citing cases where three or four executives in the same organization receive identical compensation, although one may contribute much more —or much less—than the others. In other words, management treats men who are quite unequal in performance as if they all are doing an equally good job. Many incentive compensation plans, he added, fall short of their objective. "Incentive payments move up," Mr. Tomb explained, "they never move down. Yet this is not the way in which the performance of people actually moves. Some executives 'peak out' earlier than others. Some even begin to lose ground, in terms of comparative performance. Yet many companies continue to reward them as if they still were at their peak level of performance."

As a solution, Mr. Tomb recommended that each executive—as part of the annual planning process—write down specific steps that he intends to take during the year to help accomplish the overall sales and profit goals. In effect, he will be setting up his own "action programs" which, in turn, can be used as tangible yardsticks against which his performance can be measured.

"This approach establishes a specific basis for measuring performance," Mr. Tomb concluded. "By the time appraisals are made, the planned action either has been taken or it hasn't, so there isn't much room for disagreement. In addition, this method focuses attention on the things that need doing if the company is to attain management's short-term and long-term objectives."

SEEKING OUT HIDDEN PROBLEMS

How the controller can help other departments by bringing his analytical talents to bear on their problems was outlined by W. Joseph Littlefield, research director, Controllers Institute Research Foundation. "This particular function of

controllership has two aspects," he said. "One is to solve problems brought to it by management, and the other is to identify problems which management has not yet found. When the production people decide they want to expand a plant or build a new one, they call on the controller for a financial analysis of the project.

"But the highest exercise of modern controllership is to identify the *hidden* problems of operation. The unrecognized problem can eat at the vitals of operations until serious damage occurs. Once identified, it is possible to solve the problem and point the way to decision.

"*How does the controller go about finding the unformulated problem?* There are the obvious methods of comparing operations with a standard—comparing sales and earnings with the profit plan; measuring the return on investment, and the trends of sales, earnings and return on investment. However, one of the most profitable fields is in areas where no decision has been made, as might be the case in a division where the sales and earnings remain fairly stable. *Does the manager pass up the long profit because he fears he might make a mistake?* Here is a void in modern business control, the control of errors of omission."

Discerning such errors and helping to correct them, the speaker indicated, requires not only tact and persuasiveness but also an understanding of the personalities involved. "You cannot change human nature," he commented, "but you can learn to know your people."

EDP FOR OPERATIONS RESEARCH

Speaking on "Advanced Office Automation," R. Hunt Brown, president, Automation Consultants, Inc., New York, discussed the application of scientific management to the new tools and methods of electronic data processing. "This inevitably leads us," he said, "to the subject of operations research, which is saving large sums for the companies which employ it.

"One of the most common problems of modern big business applies to manufacturing-distributing companies. *What is the optimum location of factories, warehouses and sales offices to operate with a minimum of expense?* As early as 1955, two such problems had been successfully run on the IBM 701. One was by Rayco, maker of automobile seat covers and accessories, with a formula of 37 variables to determine optimum locations of sales offices and also the forecasting of sales. Another was by Shell Oil, to minimize transportation costs from four storage points to 51 destinations. After formulating the problems and programming the computer, a button was pushed, and in ten minutes the answer was automatically printed out for 260,000 stock items."

AT THE ANNUAL MEETING OF MEMBERS, which took place during the course of the meeting in Louisville, the Institute president, Roger A. Yoder, told the members what the Institute has been doing. A highlight of this meeting was the election of new Institute directors. On the rostrum (left to right) are Roy T. Dilley, inspector of Election; Maurice E. Griffin, newly elected CIA director; Joseph J. Schofield, general chairman of the 1961 North Central Conference; P. Gordon McAusland, proxy holder; Edward T. Fitch, proxy holder; Edward H. Eaton, Area vice president; Roger A. Yoder; Paul Haase; James L. Peirce, chairman, Nominations Committee; Albert G. Nelson, inspector of Election; Irving L. Lau, inspector of Election; Robert J. Landolt, chairman, Committee on Federal Taxation; and Leon A. Ridgway, chairman, Committee on State and Local Taxation.

CAREERS OUTSIDE CONTROLLERSHIP

For those who seek careers outside controllership, Hamilton Shea, president, Shenandoah Valley Broadcasting, Inc., Harrisonville, Va., recommended a range of possibilities which included (1) an operating job or top executive post in one's present company or another firm; (2) the practice of certified public accounting; (3) management engineering; (4) teaching; (5) government work and, (6) a business of one's own.

"No other corporate responsibility can so fully give the experience and knowledge of how businesses work as does the control function," Mr. Shea observed. "As a budgeter, the controller is familiar with the prospects for sales; with the kind of sales organization and the type of promotional effort needed to reach sales goals. He knows all the elements of production. And, of course, he knows how to manage a department. "At our company, we have been successful in promoting men with a good potential and sound financial background into operation positions.

"Public accounting has advanced to a

AT THE OPENING LUNCHEON presidents of Controls from the North Central Area were seated at the head table (left to right): Louis T. Huser (Cincinnati Control); Albert G. Nelson (Fort Wayne); P. G. McAusland (Cleveland); Joseph J. Schofield (Detroit). Then Paul Haase, Edward H. Eaton, Dean Robert C. Ernst, speaker at the luncheon, James J. Cone, president, Louisville Control, Roger Yoder, James L. Peirce; followed by presidents again—Edward T. Fitch (Pittsburgh); Reverend Bowldrick, the invocator; Irving L. Lau (Dayton); Harold B. Jackson (Toledo); Arthur G. Green (Columbus) and Roy T. Dilley (Indianapolis).

THE NORTH CENTRAL AREA OPERATIONS COMMITTEE met in conjunction with the Conference sponsored by the Louisville Control. Pictured above are the Control presidents (including some newly elected presidents who will serve in 1960-1961), Institute directors and officers who comprise the Area Operations Committee.

point where it contains many of the elements of a business counseling service. It is in this respect that the controller may make his greatest contribution. For those who have the qualifications, teaching represents a unique opportunity. A controller should make a good teacher; he has experience studying facts and then reporting them to others."

Controllers are in a particularly favorable position when it comes to starting their own businesses, the speaker added, because people with money to invest look for a background in business management.

COST CONTROL & BUDGET SEMINAR

Frederick Stamm, distinguished professor of finance, University of Louisville, presided at the work-session seminar on "Cost Control and Budget." The speakers, who described their companies' methods, were W. A. Crichley, controller, Diamond Alkali Company, Cleveland; A. W. Hughes, comptroller, Rheem Manufacturing Company, New York, and Charles P. Reynolds, Jr., vice president, Trailmobile, Inc., Cincinnati.

Crichley:

Discussing cost control through standard costs, Mr. Crichley stressed the importance of operating personnel participation in designing the system. "To be good," he explained, "a standard cost system must be designed with the aid of operating people, not just for them. It must be understood by plant operating and management people, and must be accepted and backed up by management as a vital part of standard operating procedures. It must be definitive, i.e., cover an area for which one person is responsible.

"Operating people helped us design our cost system by telling us what information they really needed and the language they use to identify the process. There is no logic in having the cost sheets show efficiencies on a gallon basis if the operating man uses pounds. In short, cost statements should speak the operating man's language. We make sure that operating people thoroughly understand the underlying philosophies of cost accounting. We make sure the cost statements are used, and insist upon timeliness and accuracy. We put teeth into the system.

"We get the most mileage in this area by our monthly cost meetings at the plants, where the plant manager, the plant accountant, the departmental supervisors and the plant engineers go over the cost statements. At these meetings the departmental supervisors explain all major variances. The engineers in attendance help with the explanation. More importantly, they point out what steps should be taken to prevent a recurrence of the waste or overage. These meetings probably have done more to achieve maximum benefits, not only of standard costs, but as a means of communicating team spirit, than any other factor."

Reynolds

At Trailmobile, Mr. Reynolds reported, Manufacturing "sells" its product to the home office, which adds a mark-on and in turn "sells" it to the branches. The system measures the contributions of the three functions and also provides for a three-way split. "Each of our manufacturing plants sells its products to the home office at a production sales value determined by adding an arbitrary mark-up of 10 per cent to standard cost," he explained. "By using standard cost as a base, the plant's price becomes a function of productivity; the standards in the plant mean something as a source of income, and all the plant variances necessarily come out of profit.

"In order to give the plants relief during periods when their backlogs do not enable them to work at normal production levels, we allow a Volume Stabilization Allowance which reduces their unabsorbed burden to the extent that they are unable to absorb their fixed overhead due to low production. This factor in the plant operation becomes an added cost to the home office."

The home office sells the product to the individual branches at wholesale. It can regulate the flow of business by reserving the right to approve orders before acceptance; it can also offer concessions to the branches in order to stimulate business. The branch pays its own commissions and operating expenses, combining its profit on sales with that on service operations.

"The total gross profit to the company," the speaker observed, "is the sum of the plant profits, the home office profit and the branch profit. This plan provides a structure of operations measurement that is compatible with decentralization and expansion. It is useful in assigning responsibility for profits by function, and it more clearly defines and measures the contribution of such functions to over-all profits."

LONG-TERM PLANNING SEMINAR

The work-sessions seminar on "Long-Term Planning" was conducted by Woodrow Strickler, executive vice president of University of Louisville. The speakers were E. M. Karrmann, treasurer and controller, American United Life Insurance Company, Indianapolis; James F. Lillis, vice president and comptroller of International Telephone and Telegraph Company, New York; and Paul L. Smith, secretary and treasurer, The Bullard Company, Bridgeport, Conn.

Karrmann:

The inside directors of his company do its long-term planning, Mr. Karrmann told the audience, and their suggestions are recommended to the board for consideration. The answers to three questions, he said, provide the basis for planning: (1) *What can our industry be expected to do during the next ten years?* (2) *Should our company try to stay even*

or improve our position in the industry? (3) How can these objectives be attained? Charts were prepared, showing the industry's progress and projected growth, as well as what could be expected in the way of business and income if the company's rate of growth exceeded the industry average.

"We furnished each department head with a copy of these charts," Mr. Karrmann said, "and requested a list of his personnel needs during the next ten years, based on the objectives indicated. The secretary of the company then assembled all these data to give the executive staff an idea of how many more agents and home office staff persons would be required in that period, giving effect to retirements and resignations. It was the controller's job to translate these personnel requirements into the physical facilities which would be needed and to forecast the effect of the company's position from year to year."

Smith:

Product development is a key factor in planning for growth at the Bullard Company, Mr. Smith declared. New lines have been added, and a foreign subsidiary established in Switzerland. A long-term marketing plan and a diversification program are also included, and the company has made adequate profitability a long-range objective.

"Over a period of years," the speaker said, "we believe we should strive to earn a net 15 per cent on our book equity. The attainment of this goal, of course, is dependent to a large degree on our success with the two major goals already mentioned. However, we have also made some specific long-term plans in this area. One is pricing policy, involving a markup factor on unit product variable costs sufficient to cover the average period costs and our desired margin of profit. Another long-term plan to achieve desired profitability has been establishment of a product analysis group."

INDUSTRY LAGS IN ISOTOPE USE

A plea for wider use of radio isotopes for industrial research was voiced by the luncheon speaker on the opening day—Dr. Robert C. Ernst, dean, Speed Scientific School, University of Louisville. "The use of isotopes," he said, "is the most promising of all the peaceful uses of atomic energy at this time. In the early Sixties, industry will be able to save over $1 billion annually through their use. Industry is far behind medicine, universities and experimental laboratories in utilizing this technique."

Some of the uses now being made of isotopes in industry, Dr. Ernst said, include moisture determination of products in production lines; thickness gages for measuring sheets and coatings; tracing of flow in pipelines and other equipment; leak detection; pollution control; determination of friction and wear of parts in engine design, and measuring wear on cutting tools.

THE CLOSING SESSION OF THE CONFERENCE featured two concurrent work-session seminars, one on Cost Control and Budget and the other on Long-Term Planning. The Institute members who spoke at the latter session are (left to right): E. M. Karrmann, James F. Lillis; (non member) Woodrow Strickler (presiding); and Paul L. Smith.

George B. "Brownie" Leach, publicity director of Churchill Downs, recounted the history of the famous track at the Tuesday luncheon. The guest speaker at the banquet was Dr. Laurence H. Hall, rector of St. Paul's Episcopal Church, East Cleveland, Ohio. His subject was "Humor, a Business Asset." Edward H. Eaton, treasurer, Pittsburgh Plate Glass Company, presided.

Others who presided at sessions and functions included, in their order of appearance: Joseph J. Schofield, vice president and controller, Dura Corporation, Oak Park, Mich.; James J. Cone, manager-finance, General Electric Company, Louisville; C. K. McCracken, vice president, corporate affairs, the Procter & Gamble Company, Cincinnati; Claude W. Hupp, controller, Glenmore Distilleries Company, Louisville; Paul R. Langdon, manager, finance and accounting, Battelle Memorial Institute, Columbus, and Marion M. Johnson, vice president, Brown Forman Distillers Corporation, Louisville, who was general chairman of the Conference.

THE COURIER-JOURNAL, LOUISVILLE, KY., MONDAY MORNING, MAY 23, 1960

From False Derivation

Controllers, Here For '60 Meeting, Say 'Comptroller' Is Wrong Spelling

Is it "controller" or "comptroller?"

"CONTROLLER," emphasized members of the Controllers Institute of America, who opened a three-day annual conference of the group's North Central Area here yesterday.

The other word is strictly a misspelling, Roger A. Yoder, Detroit, area president, said.

The spelling of "comptroller" is believed to have originated from a false derivation of "compte," a French work meaning "account," he said. A controller is a person who supervises financial affairs of a company, school, organization, or government.

Yoder, president of Detroit Steel Corporation, said the adoption of "controller" by the C.I.A. when it was organized in 1931 has resulted in general use of that spelling. However, some companies continue to use the wrong spelling because of the legal complications involved in changing the title, he said. The Federal Government also uses that spelling.

About 150 persons from five states are attending the conference at the Kentucky Hotel. The group yesterday visited the horse farms near Lexington.

Dr. Robert C. Ernst, dean of the University of Louisville Speed Scientific School, will discuss atomic energy in a talk to the group today.

WHAT INTERESTS THE PRESS? A reporter at an area conference rejected the press releases as "Too technical" but wrote this story when he asked the difference between "con" and "compt."

Organizational Changes Coming with IDP

AN ADMINISTRATIVE REVOLUTION is on the way for American business—and high time says T. A. Smith, executive vice president of RCA Industrial Electronic Products. While the nation's productive machinery responded to the explosive growth of the economy with new machines, techniques and operating patterns, the clerical side has done little more than add more hands to handle more work, said the author in a recent issue of *Management and Business Automation.*

Top management has never given the clerical operations the same attention and expenditure of resources that it has the production processes, he observes. The ratio of factory workers to clerical help was around 20 to 1 some 50 years ago; 12 to 1 by 1930; and today is 8 to 1.

The corporate framework has become highly specialized by function, with each accumulating its own set of data, together with accompanying personnel to maintain and update the information on the basis of convenience. Few businesses have attempted to relieve specialized functions within their operations of clerical detail. This has led to multiple clerks, multiple and duplicating decision-making activity.

The electronic data-processing systems installed to alleviate the problem are, for the most part, still serving these functions—they have been equated with a specific job and so justified. It usually means that an electronic file has replaced a paper file. While they handle masses of data more rapidly and at lower cost, speed up data availability and greatly improve business operations, cross indexing of information between functions has not been fully implemented.

A major opportunity to derive the benefits of electronics in a broader and more effective manner exists in combining new applications of electronic devices and communications, together with analytical tools made possible by the lightning-like speed of electronics. More and more consideration is being given to the use of EDP as an over-all business control device, freed of functional limitations, and to the new techniques which can be applied under these circumstances.

"From an organization standpoint, we can expect to see—in fact it is imperative that we see—administrative vice presidents in charge of our paper-producing activity," says Mr. Smith. "Their function and responsibility will be to provide to every phase and level of management that information which they require to perform their duties.

"Under this administrative vice president we can expect to see skilled paper-handling departments, both manual and electronic, systems groups and operations research or planning groups. The administrator will see to the development and creation of the rules for processing data so that such processing will lead to the conservation of resources within the business. He will translate business objectives into system checks and balances so designed to warn management when objectives are not being achieved—or even appear to be falling short. He will develop, to the fullest, the interchangeability of business information and at all times work to anticipate the requirements of the company for information."

This method, integrated data processing, is predicated upon capturing data at the source, breaking down internal data flow barriers and rechanneling information through an EDP system coupled with communications. The computer acts as a giant filter and, working from total company information, relates current with historical activity and plans for the future to determine how much and what type of information should be released from this mass of data. It supplies data wherever they are needed for the many operations of the business.

American business, he concludes, is coming to the view that clerical operations require expert personnel skilled in modern methods, just as plant operations require specially trained personnel; the nation's powerful productive machinery must be guided by new concepts and techniques of data handling.

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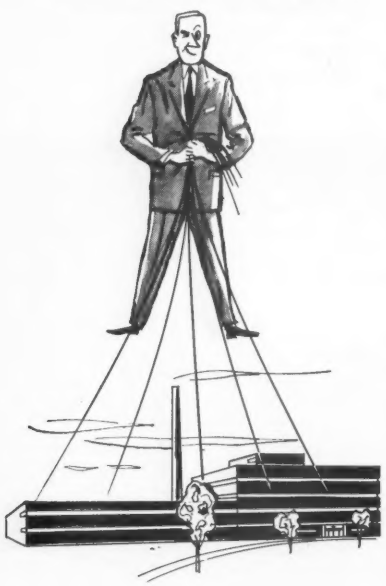

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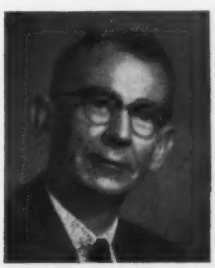

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* SECTIONS II & III each comprising 18 more Controls will appear in the August and September issues of THE CONTROLLER

Paging the New Books

THE UNITED STATES IN THE WORLD ARENA*

An Essay in Recent History

By W. W. Rostow

Reviewed by J. HENRY LANDMAN
Attorney at Law
New York

This book is a penetrating and original analysis of recent United States history with a prescription for its behavior in the immediate future in foreign affairs, for the good of all mankind, by the famous economic historian W. W. Rostow of the Massachusetts Institute of Technology. More specifically, it concerns itself with the effect of our life at home on our country's military and foreign policy, with the world problems we must solve for our own best interests, and with a prescription for achieving these results. It accomplishes all this in part by the use of history and in part by analyzing our national tradition, our national interest, and our stages of economic growth. The book's fundamental theme deals with the changes in our national tradition which are necessary to protect our national interest, in a world of dissipated power, at a time of our superlative growth.

All this is original W. W. Rostow analysis and prognosis. It reveals the insufficiency of our traditional national style and interests for the world of today. The author shows how the conceptional doctrines of our founding fathers of the 18th century, concerning political and economic liberty, social equality, and patriotic nationalism, have been modified by the practical considerations of economics and geography. These 18th century philosophical doctrines, as applied to our national scene, were bound to create internal conflicts over individualism, regionalism and race. They survived the many emergencies of the 19th century because, except for the Civil War, these were not crises and could be solved by compromising palliatives within the traditional national philosophy. The success of this philosophy in the 19th century was due to the fact that the significant problems of that period were domestic in nature and permitted ample time for solution.

It was in foreign affairs, such as the First and Second World Wars, which were both foreign and critical in nature, that our traditional policy was strained. This was evidenced by their conflict with our earlier Monroe Doctrine for the western hemisphere. Our traditional isolationism is admittedly a policy of the past. Yet it is important for us to reconcile it with our new global power politics, in a world in which many countries enjoy advanced economic growth, which entails in turn a diffusion of military and political power. More specifically, it involves our country's position in the democratic bloc vis-a-vis Soviet Russia in the communist clique and the underprivileged, noncommitted countries of Asia, Africa and Latin America.

W. W. Rostow believes our country must evolve a world policy which envisages the championship of "liberty, equality and fraternity" to the rest of the world without sacrificing our own achievements in these regards. Inherent in this cause is the apparent conflict between our national interests of world power and our traditional principles of liberty and democracy. Soviet Russia constitutes a menace to our country's independence and culture. W. W. Rostow does not advocate war to eradicate this threat. Instead he proposes our continued advocacy of democracy abroad and acceptance temporarily of approximations thereof, while trying to thwart Russian military and intellectual aggressiveness.

W. W. Rostow also believes that because of the current realization of national statehood in Africa and Asia, and the menace of Russia and her type of nationalistic imperialism, we must develop long-range foreign economic and political policy and a program of implementing it. He entertains the thought that to achieve this we need an effective promotional organization to convince both the foreign and U.S. population of our new motives.

The reviewer hazards his own thoughts as to our role in the world of today. The slogan "liberty, equality and fraternity" of the 18th century has succeeded in permeating the minds of the subjects of the most tyrannical of imperialistic countries. Hence their respective peoples have been progressively demanding political, religious, and economic democracy, social equality and national statehood, so that now it is a universal cry. Concurrently, the Space War and the Industrial Revolution are now spreading the blessings of contracted space, rapid communication, and industrial products to the underprivileged peoples of the world.

The reviewer does not view Soviet Russia as a military menace; he believes Soviet Russia and the democratic powers have reached a military stalemate. Its menace lies in the dumping of goods on the world market to the detriment of the domestic and foreign trade of our western allies and our own foreign trade. Irrespective of ideologies, Russia has the advantage of cheap labor costs and totalitarian programing. Its communism is certainly not of the earlier Marxian evolutionary variety, and is evidently no longer revolutionary. It is a union of national soviet republics and satellites with despotic Moscow in command. Some tolerance of religious liberty, the farm cooperative movement, the graduated wage scale, the trading in apartments with the payment of bonuses, and the hiring of attorneys with countenanced special payments, its nationalistic imperialism, its emphasis now on economic public welfare, and the ownership of bank accounts and government bonds are some of its current attributes that approximate what passes for democracy in practice.

On the other hand, there is much evidence of the adoption of totalitarianism both communistic and fascist, in the so-called republics in Latin America, Africa and Asia. Even in our own democracy we have adopted some socialistic planks of the Second International such as subsidized farming and the merchant marine, social security, the $10,000 guarantee of

* *Published by Harper & Brothers, 49 East 33rd Street, New York 16, N. Y. $8.75.*

bank accounts, and the like. The democracies and the communist countries are adopting one another's civilization. They are really engaged in a battle of labels. The democracies offer freedom of speech, press and the right to vote. The communists promise bread and butter and an economic millennium. (Unfortunately, the noncommitted people are more receptive to the slogans of the communists.) The mores of the democracies and the communists, as both are practiced today, are becoming more and more adaptable to each other.

The real struggle today is one of power politics between Russia and ourselves for world leadership just as was attained by Spain in the 16th century, France in the 17th century, and England in the 18th and 19th centuries. Now in the 20th century, Russia is trying to supersede us. There is at least one way in which we can help maintain our world supremacy and that is in establishing a common market for the western hemisphere. Uncontrolled free trade will lead to the economic advancement of other countries possibly at the expense of our high standards of living for a time. In another sense, we in the United States cannot take in one another's washing and enjoy our present high economic levels. We need foreign trade to maintain economic prosperity.

Planning and Justifying Capital Expenditures*

Ed. by Arthur Lesser, Jr.

Based on a symposium sponsored by the Engineering Economy Division Summer School of Stevens Institute of Technology, this report contains nine papers plus discussions on capital budgeting and project justification, post auditing, estimation of working capital requirements for long-range planning, effects of taxes on investment decisions, and evaluating uncertainty.

* *Published by the Engineering Economist, Stevens Institute of Technology, Hoboken, N. J. $10.00.*

Standard Costs for Manufacturing*

By Stanley B. Henrici

In the third edition of this volume, the author's intention is to present as much workable information as possible on how to understand a standard cost system, how to install it, and how to use it. Four main sections cover accounting; setting standards; variances; and budgets, incentive plans and miscellaneous features.

* *Published by McGraw-Hill Book Company, 330 West 42nd St., New York 36, N. Y. $8.50.*

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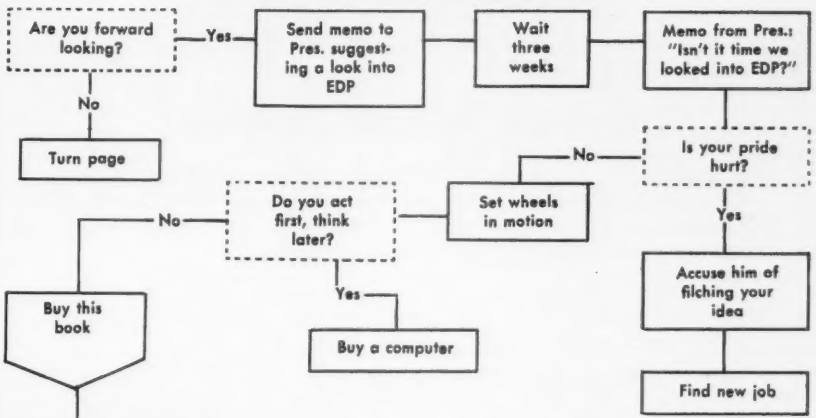

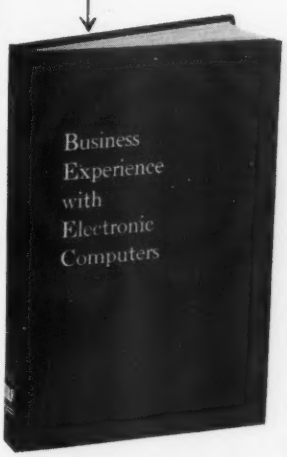

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Inventory Problems Examined

Inventories have been called the "graveyard of American business" because they have so frequently been the prime cause of business failures and voluntary liquidations, says Roy A. Foulke, vice president of Dun & Bradstreet, Inc., in a recent pamphlet, "Inventories and Business Health."

Two primary causes of inventory losses, he points out, are price drops and obsolescence. A rise in the prices of inventory may bring new life to a marginal firm but when a downward trend sets in the inventory on hand must be marked at a lower price in order to be sold in a competitive market, and losses are often taken in the process. The fluctuations in price of materials which cause losses or gains are far more common than is ordinarily assumed, adds Mr. Foulke.

Committed and undelivered inventory can be just as much of a problem as inventory on hand. By way of explanation, he mentions three "psychological sparkplugs" on which management decisions, budgets, and policies depend. They are: The expected level of prices of raw materials or finished products; the expected volume of sales in months ahead; and the expected volume of profits in months ahead.

These factors affect companies small and large. But in giant corporations, inventory, even when not on hand, can cause problems. Many raw materials and finished products are contracted for months or even years ahead by larger corporations. If sales fail to materialize and inventory commitments cannot be curtailed, a serious inventory situation can occur even before inventory reaches the premises.

Mr. Foulke says, "Comparatively few managements recognize an excessive inventory condition during its early stage as they seem to lack some means of setting a definite dollar limit which the inventory of their business should not exceed."

Two guides which can provide a fuller comprehension of inventories and their control are the financial ratios of net sales to inventory and net working capital to inventory. The computation and use of these ratios will help many businessmen to understand better the financial aspects of inventory and, when combined with awareness of style, customer needs, and new product developments, will aid in overcoming the dangers of excessive inventory and obsolescence.

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Clerical Work Measurement

(Continued from page 322)

By contrast, in most systems and procedures analyses, a number of ideas on the best way of doing a job are batted back and forth with the final decision usually being made by the senior member of the group. This situation is corrected by the use of standard data since they provide units of measurement just as concrete and specific as the linear measurements used by the product designer. Using standard data, it is possible to compare one procedure against another with only a written description available. The data measure the methods required by one procedure versus any other under consideration. Time values can be applied and labor costs calculated. This, of course, is one of the chief factors to be considered in the adoption of any system or procedure.

In one case the standard data approach to the measurement of clerical activities worked in this manner:

A medium-sized company, which processed approximately 150,000 invoices a year, precut the invoices on tab equipment two weeks before shipment. Because of the nature of the product, many of the shipments were prepaid. When this occurred, a copy of the shipping paper with the noted charges was sent to the billing office, where the original invoice had been filed. The original invoice was then inserted in a typewriter (the type of which did not match the tab's printing) and the shipping charges and new totals were typed on it.

On several occasions the suggestion was made to management that rather than perform this operation on a typewriter, the clerk do it with a pen. Each time the suggestion was turned down because it was said the pen notation wouldn't look as well as the typed notation. "And anyway, *what would be saved?*"

Shortly after this company adopted the use of OMC data, the suggestion was again made. This time, data were used to cost the procedure of typing the shipping cost on the invoice compared to the cost of writing it. The proposed procedure showed an annual saving of $1,800.00. When this fact was presented to management, it was in a position for the first time to appraise the proposed change on its true cost reduction merits. The new procedure was immediately adopted.

PREASSESSING THE TRUE VALUE OF NEW EQUIPMENT

With a simple labor cost formula used by industrial engineers (occurrences × labor × .001 minute), it is possible to calculate a costing factor for use on any paperwork operation. This costing factor, in conjunction with time values obtained from data, makes it possible to evaluate accurately the true value of proposed new equipment before even preparing a requisition for allocation of funds. This allows the case "for or against" purchase of a new piece of hardware to be decided on fact, not fancy.

Today, standard data are being used to make sound selections, from an operating labor cost viewpoint, between competing pieces of equipment. Usually one piece of equipment, although similar to another, will be better suited for a particular purpose. The objective evaluation of equipment is feasible because in almost every case, it is possible to synthesize a method for operating the proposed equipment. With standard data of the OMC type, labor requirements and costs can be determined and compared.

WHETHER TO AUTOMATE

To automate, and to what degree, is probably the most important decision any office's management can make today. Apart from the factor of initial cash outlay, the office personnel's reactions during the changeover must be considered. Precise job descriptions and assignments must be prepared during a time when employes are concerned about their futures. Standard knowledge of the data and their use is easily transferred. General office personnel have been able to acquire the know-how of their application in several weeks. A number of companies even go to the point of having their regular line supervisors learn their application in their individual areas.

Because of the general construction of data, all that is required is to be able to identify the work elements of any job. Experience teaches one to see a job or operation as a series of separate elements rather than as a complete unit. For example, opening and closing a file drawer is only one element in a filing operation. The separate elements such as walking to the file, locating the proper drawer, finding the proper folder, and removing and returning the folder, must be considered. The total of the data time for these elements provides the standard for the operation. These steps are shown in *Charts A* and *B*.

A word of caution: Data can only be as good as the understanding of their application and of their limitations. In this field, do-it-yourself projects seldom succeed.

To conclude, measurement is one part of efficient office management. You must also control what you measure. To do this, remember to follow up the standards, once they are established, with soundly developed reporting routines and periodic progress reviews.

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Accountants Harder to Find

Qualified accountants are harder to find this year than in 1959, notes a *Wall Street Journal* survey of personnel officers of corporations around the country. This is just part of the survey picture which shows this year's typical college graduate is being offered more jobs and higher rates of pay than his counterparts of the past two years. Even companies with poor business prospects for the next few months want to begin training skilled personnel they figure to need in the years to come.

"A lot of people laid off recruiting in the 1958 recession and now they're coming back strong and pushing up demand," declares an executive of a big Chicago accounting concern. ". . . it's a lot tougher to hire off the top of the pile."

George Yoxall, assistant director of personnel administration of Inland Steel Co., Chicago, says Inland will hire 140 graduates this year, the same as in 1959, but adds that the company has had to make more offers to more prospects this year to fill the quota. "The ratio of offers to acceptances for accountants, for example, has increased to 4 to 1 from 3 to 1 last year," says Mr. Yoxall.

He puts the average starting pay for graduates with bachelor's degrees in accounting at $490 to $500 a month, up about $25 from 1959. A master's degree is generally worth about $50 a month more.

Boston University reports many companies are offering its graduates salaries some 5 per cent better than those offered last year. Graduates in science, engineering and accounting have been in strongest demand and have benefited the most from the increased pay levels, a university spokesman says.

A Brace of Computers Introduced

Radio Corporation of America has announced the introduction of two new all-transistorized electronic data-processing systems. The large-scaled 601 will start renting at upwards of $20,000 monthly, and the "compact" 301 up to $9,000 monthly.

Accounting in Nonprofit Organizations To Be Studied

A study of the accounting problems of nonprofit organizations will be undertaken by the accounting research division of the American Institute of Certified Public Accountants. The study will be concerned with major accounting problems and general principles rather than bookkeeping and accounting systems, and an attempt will be made to determine the extent to which accounting principles applicable to profit-making enterprises are appropriate for nonprofit organizations.

New in Electronics

The National Cash Register Company has introduced the NCR 390, claimed to be the first computer capable of reading a commercial document. A magnetic coating placed on the back of the record functions as a miniature electronic memory which stores the information on the document and activates the machine. The computer sells for $75,000 and rents for $1,850 monthly.

•

The addition of Univac III to its line of large-scaled computers has been announced by Remington Rand Division of Sperry Rand Corporation. It was described as having a processing speed nine times faster than its predecessor, Univac II. Typewriter communication in English can be maintained between the operator and the computer itself. The solid state computer will rent for $15,000 to $30,000 a month, depending upon the system requirements of the user.

Ford Lab Gets Five-Year Budget Guarantee

Ford Motor Company has guaranteed for five years the budget of its Scientific Laboratory, part of the Engineering and Research Staff. "The budget will assure continuity of the Laboratory's operations without regard for business fluctuations," said Henry Ford II. It was also pointed out that stable long-range planning is necessary for the proper support of research, and that the five-year budget will permit the Laboratory to attract the best available scientists of various specialties.

Dispersion of Effort and Lack of Research Hamper Area Development Programs

An estimated 14,000 development organizations in the U.S. employed more than 10,000 persons and spent at least $220 million in 1957 but there are few programs that can yet be considered adequate to deal with problems already in existence or beginning to emerge. Many of these problems are too large to be dealt with effectively by a voluntary organization or a single-purpose government agency, as shown in a recent survey by the Committee for Economic Development. Many of the difficulties of development organizations arise from fragmentation of effort.

Other findings show that more money is currently being spent on promotion than on the research and planning needed to develop a solid foundation for promotion; the concentration of economic thinking and policy recommendations on national economic problems has left almost unnoticed those matters which affect economic growth at the local, state and regional levels; and the overlapping and inadequate jurisdiction of public and private agencies involved in the metropolitan framework lead to further difficulties and frustrations.

Entire Production Process Electronically Controlled

Savings of $120,000 a year in production costs are anticipated by the American Bosch division of the American Bosch Arma Corporation from the installation of an electronic system to control manufacturing from raw material to finished product. The electronic complex automates handling of six basic manufacturing functions—sales forecasting, materials planning, inventory management, plant scheduling, work dispatching and operations evaluation—through an IBM computer and specially designed auxiliary data-processing equipment. The entire control process is set in motion by a customer order or series of orders in punched card form that feed into the electronic system.

Depreciation Booklet Available

A 23-page examination of the depreciation situation, "The Many Sides of Depreciation" by Professor Leonard E. Morrissey, is available gratis from The Amos Tuck School of Business Administration (Dartmouth College, Hanover, New Hampshire). The subject is reviewed especially in the light of the 1954 Revenue Code and about half of it is devoted to accelerated depreciation.

Business Planes Logging More Hours Than Scheduled Airliners

More companies are using their own planes for traveling company personnel than ever before. Business flying is now second only to Air Force flying in the number of hours aloft, reports the National Aircraft Association. The number of business planes on January 1, 1960 was estimated at 28,000. These planes flew an estimated 855 million miles in 1959 as against 339 million in 1950, and chalked up a total of 5.7 million hours of flying in 1959 against 3.8 million hours by the domestic scheduled airlines.

Savings of time and executive manpower are the compelling forces behind the movement.

Trend Toward Auto Leasing Where Annual Mileage Is High

Of the 650 companies surveyed by The Dartnell Corporation of Chicago, 37 per cent now lease cars for business use as against 25 per cent in 1956 and 14 per cent in 1952. Capital freed for other purposes is the reason most often cited for the change. The trend is most noticeable in firms that report high annual mileage figures for their cars. Most fleet managers agree that leasing's advantages show up best if the average annual mileage figure is high—15,000 miles or more.

Accounting for Foreign Operations Studied

Methods for translating foreign currency accounts, applicable when exchange ratios rise as well as when they fall, are presented in "Management Accounting Problems in Foreign Operations" issued by the National Association of Accountants. The foreign accounting practices of 51 companies form the basis for the report. Other problems considered are the effects of distance from the U. S. parent, language barriers to easy communications, different laws and customs, and the different accounting practices followed in foreign countries.

Sick Room at the Top for the Self-made Man

The Horatio Alger type is more likely to pay for his success with impaired health than is his college-educated counterpart, according to a recent study presented to a meeting of the American Federation for Clinical Research. The study, which compared two apparently similar groups of young business executives, found that those who went to work immediately after high school and rose through the ranks were found to have more of the signs that usually precede heart disease and more illnesses, than generally did the young men who made the easier transition from college to junior-executive status.

For what it's worth...

How should the purchase price be allocated?

Adapted from one of the Clients' Service Bulletins of The American Appraisal Company

When a business or property is purchased for a lump-sum price, the new owner is frequently confronted with several important questions:

1. How shall I distribute the price to various classes of assets—including depreciable and nondepreciable property—for accounting and income tax purposes?
2. At what rate shall I take depreciation on various types of depreciable property?
3. How much insurance should I carry? This may not be related to the purchase price.

Income tax requirements

In arriving at the purchase price, consideration undoubtedly has been given to earnings, net worth, present or future prospects, and utility. Such broad estimates, however, rarely answer the above questions and so may fail to serve future needs.

For income tax purposes, it is necessary to allocate the lump-sum purchase price to all assets, both depreciable and nondepreciable. It is desirable to allocate costs further among major units and groups of minor equipment classifications. This permits the assignment of remaining lives and the proper accounting for future retirements and transfers.

An appraisal to furnish the fair market value is the logical first step in distribution of a lump-sum purchase price to the assets involved. It should be accompanied by a report on the estimated remaining useful lives of the assets to establish the proper depreciation provisions.

For insurance coverage

The appraisal should also be designed to meet the insurance requirements. Regardless of the cost basis, the insurable value should be based on current cost of reproduction less depreciation. Values should be regrouped as required by the insurance policy.

This will provide for insurance coverage, for rating purposes, and for the necessary details to prepare and support a proof of loss if required in the future.

★ ★ ★

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Personal Notes

NEW CONNECTIONS . . .

Wilbur P. Auvil has joined the Roberts Company, City of Industry, Calif., as controller. . . . Frontier Airlines Inc., Denver, Colo., recently announced that **Edward F. Dolansky** had become its treasurer. . . . **Edward J. Fitzgerald, Jr.** recently became controller of R. D. Werner Company, Inc., Greenville, Pa.

Richard A. Hughes is vice president-finance of Minnesota Electronics, St. Louis Park, Minn. . . . **Myron S. Kem** was named treasurer of Raymond Bag Corp., Middletown, Ohio. . . . **Robert Logie** has become vice president and general manager of Griscom-Russell Company, Massillon, Ohio. . . . **Vincent T. Lorimer** has assumed the controllership function at Erickson Petroleum Corporation, Minneapolis, Minn. He is currently serving as president of the Kansas City Control of Controllers Institute.

Albert L. Moeng, Jr. recently became controller of Hyman-Michaels Company, Chicago, Ill. . . . **G. W. Schroedel** recently became comptroller of the American Writing Paper Corporation, Holyoke, Mass. . . . **W. G. Torrace** has joined Talley Industries, Inc., Cheshire, Conn., as treasurer. . . . **Charles F. Watson** recently became comptroller of General Railway Signal Company, Rochester, N. Y. Mr. Watson served as president of the Rochester Control of Controllers Institute, 1958-59. . . . **Richard D. Windatt** has joined Wometco Enterprises, Inc., Miami, Fla., as vice president-finance. . . . **Joseph C. Winkler** recently became director of finance and administration of Ideal Toy Corporation, Hollis, N. Y.

PROMOTIONS . . .

William J. Ashe was named administrative and financial vice president of Witco Chemical Company, New York. . . . **Wilbert J. Billigmeier** has been made vice president in charge of marketing, sales and distribution of the Bowman Biscuit Company Division, United Biscuit Company of America, Denver, Colo. . . . Standard Financial Corporation, New York, has named **S. J. Dimodica** financial vice president and treasurer. . . . **J. Karl Fishbach** recently became corporate controller of City Stores Company, New York.

The election of **James L. Peirce** as vice president-finance and treasurer of A. B. Dick Company, Chicago, Ill., was announced recently; he will continue as secretary also. **Wallace M. Carrithers** was elected to succeed Mr. Peirce as comptroller. Mr. Peirce is a director at large of Controllers Institute and is a past president as well as past chairman of the board. . . . **Raymond H. Giesecke** was named executive vice president and treasurer of McGraw-Edison Company, Chicago, Ill. He served as president of the Chicago Control of Controllers Institute, 1959-60.

Harold E. Jackson has been appointed senior vice president and treasurer of Southern Natural Gas Company, Birmingham, Ala. . . . The promotion of **John V. James** to controller of Dresser Industries, Inc., Dallas, Texas, was announced recently. . . . **Edward Z. King, Jr.** was recently appointed comptroller of International Paper Company, New York. . . . **K. G. Hovland** was elected vice president and treasurer of Kansas City Power & Light Company, Kansas

MR. FITZGERALD

MR. DOLANSKY

MR. JAMES

MR. HOVLAND

MR. RHODES

MR. WITTMAN

City, Mo. . . . H. F. Livermore Corporation, Boston, Mass., has appointed **John G. Manning** vice president.

Sylvania Electric Products Inc., New York, recently announced the election of **John E. Rhodes** as controller. . . . Named to the newly created post of assistant manager of the Industrial Components Division of Raytheon Company, Newton, Mass., is **George T. Ryan.** . . . **Harris H. Stoddard** was named senior comptroller of General Railway Signal Company, Rochester, N. Y. . . . **A. M. Wittman** has become treasurer of Standard Register Company, Dayton, Ohio.

ADDITIONAL DUTIES . . .

Charles F. Axelson has been appointed controller and assistant treasurer of United States Gypsum Company, Chicago, Ill. Mr. Axelson is a past president of the Chicago Control of Controllers Institute. . . . **Lawrence H. Cousineau,** vice president of Cincinnati Milling Machine Co., Cincinnati, Ohio, has been made president of the Heald Machine Company, Worcester, Mass., a subsidiary. . . . **Frederic A. Curtis** has assumed the responsibilities of vice president and comptroller of Continental Illinois National Bank and Trust Company of Chicago, Chicago, Ill.

Jack P. Donis has become vice president-controller of Continental Grain Company and controller of Arrow Continental Corporation, New York. . . . The election of **C. Rankin Hoskins** as treasurer and controller of Aircraft Armaments, Inc., Cockeysville, Md., was announced recently. . . . **Robert L. MacKenzie** is vice president and controller, Bigelow-Sanford, Inc., New York. . . . **H. D. Nelson** was recently elected vice president and comptroller of Clark Equipment Company, Buchanan, Mich. . . . **Clarence A. Snow** was named treasurer and controller of Bowser, Incorporated, Chicago, Ill.

W. E. West, vice president, treasurer and controller, Nationwide Insurance Companies, Columbus, Ohio, was named treasurer of National Services, Inc., a new subsidiary. . . . **John R. Swann,** comptroller and assistant treasurer, General Products Mfg. Corporation Ltd., London, Ontario, Canada, has been elected to the board of Richards-Wilcox Canadian Co. Limited, a subsidiary.

HONORS TO . . .

Hans C. Todt, comptroller, Bristol Laboratories Inc., Syracuse, N. Y., received the degree of Master of Business Administration in June at the commencement exercises of the Graduate School of Business Administration, Syracuse University, Syracuse, N. Y., where he also has been teaching a graduate course in Controllership. Mr. Todt is chairman of the Education Committee of Controllers Institute and on May 20 was a speaker at the Ohio State Institute on Accounting. . . . **Vincent C. Ross,** vice chairman, Prentice-Hall, Inc., Englewood Cliffs, N. J., received the honorary degree of doctor of laws from St. Michael's College, Winooski Park, Vt. Mr. Ross is a past president and past chairman of the board of Controllers Institute. . . . **James A. McFadden, Jr.,** director of Administrative Services, RCA Laboratories Div., Radio Corporation of America, Princeton, N. J., has received an LL.D. from Princeton University, Princeton, N. J. Mr. McFadden is co-author with C. D. Tuska of *Accounting & Tax Aspects of Patents and Research* published by D. Van Nostrand Co., Inc., Princeton, N. J.

MR. CURTIS

MR. NELSON

MR. SWANN

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More Companies Buy Travel Insurance

THE PROPORTION of companies providing their employes with some form of insurance against business travel hazards has risen from two out of three in a 1956 survey to three out of four in a survey released recently by the National Industrial Conference Board.

The growth in employe travel insurance protection over the past four years is reflected not only by the larger proportion of companies providing such insurance, but also by an upward trend in benefit levels and a general broadening of company plans to include more travel hazards and more employes. Costs of these programs vary with the extent of protection offered, but respondents generally indicate that the costs are nominal by comparison with other employe benefits. Many companies participating in the earlier survey have since abandoned air travel or other limited forms of coverage in favor of all-risk business travel contracts, or have substituted a blanket travel policy for one insuring only named executives or key employes.

Even among companies without travel insurance, there seems to be wide acceptance of the idea that companies should assume some responsibility for covering their employes against business travel risks.

Some companies say they have not found a suitable policy, or have not yet settled upon the combination of coverages that will best meet their special needs. Others feel their travel exposures are limited enough to be met by the occasional purchase of trip coverage for an employe, or by the authorized reimbursement of premiums for "slot-machine" insurance.

Still others acknowledge the need for insuring business travel hazards, but are meeting it by amending their group life and accident insurance plans to provide higher or double indemnities in the event of accidental death or dismemberment. A number of respondents report they favor this solution because it does not differentiate between the hazards of business travel and those of other work assignments.

The extent of employe coverage under company travel plans still varies widely, but is definitely broader than it was in 1956, according to the Conference Board.

Some 64 per cent of the companies insuring business travel hazards now extend that insurance to all employes exposed to those hazards; 17 per cent insure all salaried employes, or all employes exempt from the federal wage and hour law; and 6 per cent insure all executive or management employes. The remaining 13 per cent insure only selected executives or key employes.

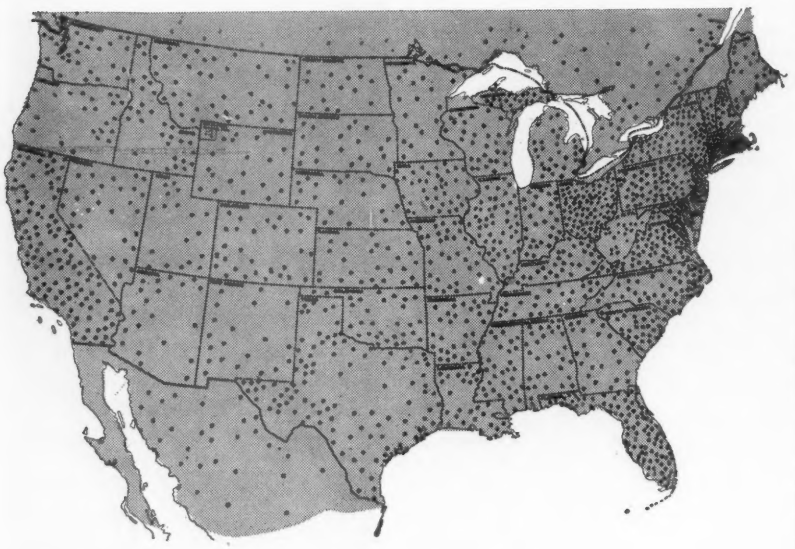
The majority of travel contracts provide benefits only for death or dismemberment injuries, and do not provide for medical expense or weekly indemnity payments.

The current study was conducted among 319 manufacturing firms, while the earlier report covered the experiences of 281. Respondents to the current survey include 179 of the companies that replied in 1956.

U. S. Owns Over Half of Five States

The U. S. Government owns more than half the land in five states according to the General Services Administration's report on fiscal 1959 real estate operations. The GSA's annual inventory shows the Government owns 362.2 million acres, or 99.1 per cent of the area in Alaska; 60.7 million acres, or 86.4 per cent in Nevada; 36.5 million acres or 64.2 per cent in Idaho; and 31.6 million acres, or 51.2 per cent in Oregon.

The Government's real estate holdings are valued at $49.2 billion, up $3.6 billion from a year ago. About half this increased cost went into building and enlarging Air Force facilities.



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Depreciation Allowances Not Fully Utilized

(Continued from page 328)

Those in Group D normalize their taxes by either setting up a deferred tax or adding the tax difference to depreciation. As long as the character of these companies is closer to Case I than Case II, the increase in the deferred tax account (or in the reserve for depreciation) will be small. If, however, they are companies which are continually growing and steadily making capital expenditures, then the deferred tax account will grow to about 8 per cent of the total cost of depreciable facilities. Or the addition to reserve for depreciation, if that is the method used to normalize taxes, will be equal in amount; but this will not be noticeable because of the large proportion of capital expenditures only partially depreciated in a steadily growing company.

On the other hand there are a number of companies, including some large ones, which believe that straight line depreciation properly measures the decline in earning power of their facilities, and that therefore it should be used on the books, but that accelerated depreciation should be used in order to reduce the tax bill. They believe, therefore, that the tax difference should be allowed to "flow through" to earnings. Undoubtedly those in Group C include these companies, as well as some where the difference is not significant, or where certain regulations force the use of this method.

So there seems to be quite a difference in point of view between those in Group C and those in Group D. On the other hand there seems to be little, if any, objection to the point of view that accelerated depreciation more nearly measures the reduction in earning power of facilities; hence it should be used on the books, for reporting and for calculating income taxes, as is done by those in Group B.

WHICH FORM OF ACCELERATED DEPRECIATION—OR BOTH?

There seems to be quite a difference in practice among companies who use accelerated depreciation. Of the 999 respondents in Groups B, C and D, 38 per cent (or a total of 377) use sum of the years digits, while 46 per cent (or 456) use double straight line rate on declining balance. Less than 17 per cent (166) use both methods. The percentages in each of these three classifications vary among Groups B, C and D as shown by the tabulation below.

The largest group uses declining balance depreciation. This method accumulates a greater tax deferral than the use of SOYD depreciation, if a significant salvage value is assumed with the latter. With no salvage value the SOYD method will accumulate a greater tax deferral for lives greater than five years. Hence for facilities depreciated at a composite rate (in which usually no salvage value need be considered and lives exceed six years), the SOYD method is preferred. However, for facilities of short life, not included in the composite group, declining balance depreciation may be better.

TAX ACCOUNTING

Partly because of the high rate of income tax, many enterprises have adopted a policy of tax management, under which every legitimate means is used to reduce the tax bill and preserve cash. Obviously, to make the most profitable decisions under this policy, forecasts must be made for several years ahead. Under such tax accounting, expenditures which before the advent of income taxes might have been capitalized, are charged to operations. There is no need herein to recount various practices which are the result of this policy.

Under such tax accounting, a company will adopt that type of depreciation which accumulates the greatest tax reduction. However, there are circumstances under which an immediate tax reduction might result in sufficiently greater taxes later to make it more difficult to determine the true facts for decision. Two such situations come to mind, and there are probably others: *(Continued on page 352)*

SUMMARY OF PRACTICE AMONG THOSE USING ACCELERATED DEPRECIATION FOR CALCULATION OF INCOME TAXES

(% of each group shown)

Type(s) of Accelerated Depreciation Used	Total Industry Response Groups B, C & D	Group B Accelerated depre. for all purposes	Group C Straight line depreciation for books & reports: Without further adjustment	Group D Straight line depreciation for books & reports: Taxes are normalized
SOYD	337	310(42%)	28(31%)	39(22%)
Decl. Bal.	456	330(45%)	38(43%)	88(49%)
Both methods	166	92(13%)	23(26%)	51(29%)
Total 3 groups	999	732(100%)	89(100%)	178(100%)
% Grand Total	75%	55%	7%	13%

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Depreciation *(Cont. from page 351)*

1. Some companies with mineral properties may deduct from earnings for tax purposes, as depletion, an amount which is the lower of two figures: one a ratio to earnings, and the other a lower ratio to sales. Under these circumstances the tax saving may be offset by reduced depletion, and careful analysis is required to determine the best course.

2. Another enterprise may adopt the premise that income tax rates will rise, and thus it would be better to take more depreciation later when the tax rate is higher, and less now.

But except for circumstances such as these, *should not tax accounting result in the use of maximum depreciation?*

Would not such a policy dictate the use of both SOYD depreciation and declining balance depreciation?

Would not each be used so that the greatest depreciation will accumulate, and result in an optimum accumulation of tax deferment?

If the answer to these questions is "yes" then it seems surprising that less than 17 per cent of the companies reporting the use of accelerated depreciation are using both kinds.

COMMENT

There seem to be many differences of opinion regarding the use of accelerated depreciation. Among public accountants there is greater consensus. For instance we understand that when Bulletin #44 was adopted unanimously by the 21-member committee on accounting procedure of the American Institute of Certified Public Accountants, five of the members of the committee assented with qualifications. Two of these took the position that normalization should be required in all cases and three took the position that the requirements for normalization were too restrictive.

On February 29, 1960, the Securities and Exchange Commission published Release 33-4191 (Accounting Series Release No. 85) which deals with the practices discussed herein. The main thrust of the Release appears to be against the designation of the accumulated tax difference as earned surplus (or its equivalent) or in any manner as a part of equity capital, even though accompanied by words of limitation such as "restricted."

Thus the public accountants and the SEC approve the practice followed by those in Group A, B and D (provided those in the last named group do not credit the normalizing amount to an equity account). They also disapprove of the practice of those in Group C, except under certain circumstances, or where amounts are not significant.

On the other hand, we find industrial accountants and managements of businesses who believe that the flow-through method followed by those in Group C is consistent with the facts. They believe that the liability for deferred income taxes is more contingent than real; *viz.*, it involves no certain dollar amount, has no maturity date, and in a growing company may increase indefinitely. (It may vary with the rate of income tax.) Of course, the premise for this position is that accelerated depreciation will continue to be permitted indefinitely. This group also objects to setting up a deferred tax account which will grow to such size that political pressure will cause the repeal of the 1954 legislation so the Government can collect from its "debtors." (On the other hand it seems that increasing the reserve for deprcciation by tax normalization may avoid this latter objection.)

It should be noted that the main difference between those in Group B and those in Group D, who add the normalization amount to the depreciation reserve, is in amount of depreciation taken on the books, and carried to net earnings. Income taxes and cash flow are the same.

CONCLUSION

It appears that the different policies concerning the use of accelerated depreciation rest in part on different circumstances, but depend also on the question of the permanence of the law permitting the use of accelerated depreciation, and on income tax rates in the future. The chance of accelerated depreciation being continued substantially unchanged indefinitely depends on politics, on how the present law is used and abused, and on how it accomplishes its stated purpose of encouraging capital expenditures.

In any case, it appears that many companies would find it advantageous to review their depreciation policy.

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Notice of change of address for THE CONTROLLER should be received in the editorial offices of THE CONTROLLER, Two Park Avenue, New York 16, N. Y., before the first of the month to affect the following month's issue. For instance, if you desire the address changed for your September issue, we should be notified of your new address before August 1. *Be sure to include your postal zone as well as your old and new address.*